EVALUATION OF ORNAMENTAL PLANT INTRODUCTIONS

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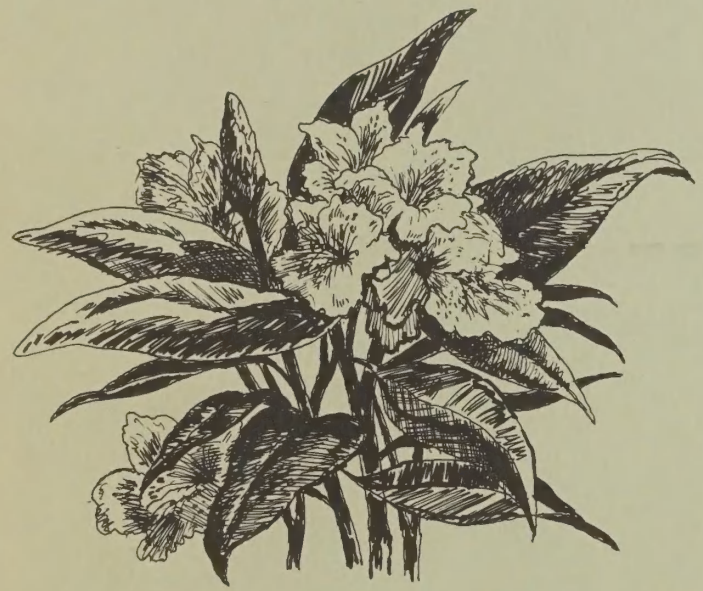

PLANT SCIENCE
RESEARCH DIVISION

AGRICULTURAL RESEARCH SERVICE • U.S. DEPARTMENT OF AGRICULTURE

EVALUATION OF ORNAMENTAL PLANT INTRODUCTIONS

By H. H. Fisher[1]

Introduction

The New Crops Research Branch, Plant Science Research Division, acquires plant material from as many areas of the world as are accessible through correspondence or direct exploration. All forms of plant material new and different to this country are sought, but most of the material received is seed. Seed is not only the most conveniently handled material but provides the greatest range of variability desirable in breeding programs. The plants received may be usable without change, but often only through selection and breeding can improved forms be obtained. Agricultural crop plants make up the bulk of plant material accessioned by the Branch. The discussion in this publication will be confined to ornamentals.

The Branch propagates, in limited quantities, the ornamental plant material received and distributes it to Federal and State experiment stations and selected private cooperators throughout the country. These cooperators test this material for adaptability to various conditions and generally evaluate it.

The plant performance reports prepared by the cooperators largely determine whether an accession is worthy of further trial and the type of use for which the plants are best suited. The final product of selection or breeding or both is released to the trade for propagation and sale to the public.

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History

Inventory No. 1 of Foreign Seeds and Plants imported by the Section of Seed and Plant Introduction was published by the Division of Botany, U.S. Department of Agriculture, in 1899. The introductory statement of that inventory specified that the plant material imported by that office was intended "for the use of the experiment stations and private parties having special knowledge and experience in the cultivation of particular crops." The statement continued, in the explicit literary style of the era, "that an honest and intelligible report will be made."

As the plan was originally conceived, seed was distributed among the cooperators as it was received by the Section of Seed and Plant Introduction. The cooperators were informed that in "an actual experiment . . . the imported seeds will be brought into comparison with those of other varieties grown under similar conditions."

By 1911, plant introduction gardens had been established at Chico, Calif., and Coconut Gross (Miami), Fla. At these locations and at the Department's facilities in Washington, D.C., accessions of more plants were possible, which, in turn, provided larger quantities of material for distribution. In 1919, a new facility opened in Glenn Dale, Md., and the Washington activity was transferred to that station. This still further enlarged the capacity for distributing plant materials to cooperators for testing. A fourth, the smallest, plant introduction garden was also established in 1919 at Savannah, Ga. As vegetative propagation was then available, small plants were distributed more commonly than seed.

The Washington office prepared and circulated to the cooperators descriptive lists of material that was available. Requests for material selected from these lists were returned to the Washington office which in turn forwarded them to the respective locations where the plants were propagated.

During World War II, Glenn Dale suspended distributing plant material. General distribution of ornamentals was also discontinued at the Chico and Savannah stations. The evaluation of plants by cooperators continued only at the Miami station.

In 1950, the evaluation program at Glenn Dale resumed on a limited scale. It did not resume at either Savannah or Chico.

Organization and Procedure

The New Crops Research Branch, with its present structure, is the latest of many successors to the Section of Seed and Plant Introduction. Like its predecessors, the Branch is the parent unit of the Plant Introduction Stations at Glenn Dale, Chico, Miami, and Savannah. Under the present organization, plant lists are prepared at the station where the plants are propagated. All reports and correspondence from cooperators relative to the plants are directed to the respective stations. Only guidance and approval of the work carried on at the stations are provided by the Branch headquarters at Beltsville, Md.

Cooperators receiving plants are asked to furnish certain information about them. Usually those who receive plants from Glenn Dale are sent a questionnaire to complete and return after two full growing seasons. Limited information about the conditions under which the plants are grown is thus obtained. In addition, information is also obtained on the performance of the plants under the conditions of trial.

Only maximum and minimum temperatures are reported. This is sufficient to indicate a plant's limitations. The hardiness profile of a plant should include the duration of temperature extremes, relative humidity, wind velocities, and light intensities. However, requiring a cooperator to furnish such sophisticated data is not practical. If a plant shows promise, the additional data are obtained elsewhere.

Evaluation

Occasionally, an introduction is an instant success without undergoing any transformation through selection or breeding. A chrysanthemum hybrid, 'Asinanoyuki', P.I.[2] 235892, is an example. This plant was found in a nursery in Japan in 1956 by J. L. Creech, New Crops Research Branch. Sufficient plants, renamed 'White Spider Tokyo', were propagated at Glenn Dale to distribute to a small number of special cooperators in 1958. By 1967, this plant was reported as having a $1 million gross value in the florist trade.

Sometimes, the ornamental value of a plant is discovered as a byproduct of an introduction made for other purposes—as with the 'Bradford' pear. Seed of *Pyrus calleryana* Decne. was originally introduced from China in 1919 in a search for resistance to fire blight and for rootstock studies.

A vigorous, nonspiny seedling was selected from a large population of *P. calleryana* seedlings that were being studied at the Glenn Dale station and was transferred to the permanent planting. This seedling was assigned P.I. 209840. The development and naming of the selection is described by Whitehouse, and others (*8*) and Ackerman and others (*1*).[3] It is further described in U.S. Dept. Agr. Home and Gard. Bul. No. 154 (*7*). The 'Bradford' pear was released to the trade by the Crops Research Division, Agricultural Research Service, in January 1960. It has become one of the most popular street trees in the trade. At last count, it is advertised by 38 nurseries in 18 States.

Public acceptance of plant introductions is unpredictable. According to Fisher (*5*), *Quercus acutissima* Carruthers has been in cultivation in the United States for over 60 years. Plants of this oak were widely distributed by the Department in 1922 and 1923 and again in the early 1930's. Seed of the same species was distributed to a few cooperators in 1941, 1942, and 1953. The tree is recommended for general planting by Wyman (*10*) and by Plants and Gardens (*4*). But it is listed as available by only one retail nursery and five wholesale nurseries in Plants and Gardens.

Listed in the following tabulation are 1,217 accessions that have been distributed from the Glenn Dale station to cooperators during the 15 years from 1957 to 1971, inclusive. Some items have attracted considerable attention. The value of the others, especially those collected as seed from the wild, will not be known until the desirable genes that they may carry are successfully used in breeding programs.

Described here are a few accessions whose special merits have already been described in cooperators' reports. These items are marked with an asterisk (*) in the tabulation.

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[2] Plant introduction accession number of the U.S. Department of Agriculture.

[3] Italicized numbers in parentheses refer to Literature Cited, p. 44.

(*accessions whose special merits have already been described in cooperators' reports)

Plant	P.I. number	Source	Collected
Abelia grandiflora X *schumanii* 'Dwarf Purple'	201092	Maryland - Selected at USPIS, Glenn Dale	1952
**Abies georgei* Orr	295099	Ireland - Earl of Rosse, Birr Castle, Offaly	1964
A. kawakamii (Hayata) Ito	324940	Taiwan - Mt. Hohuan	1968
A. koreana Wilson	317188	Korea - Mt. Halla, Cheju Island	1966
A. mariesii Masters	286555	Japan - Mt. Iwate	1963
A. nephrolepis (Trautv.) Maxim.	317189	Korea - Mt. Sorak	1966
A. spectabilis Lambert ex Spach	307189	India - Near Sandakphu	1965
Acanthopanax trifoliatus (L.) C. Schneid.	239991	Sicily - Univ. of Palermo Botanical Garden	1957
Acer campestre L.	293752	USSR - Riverside forest, Yalta	1963
A. caudatum Wall.	285313-314	Nepal - Mt. Furkai	1962
A. ginnala Maxim.	262710	USSR - Presented by Premier Khrushchev	1960
**Acer ginnala* var. *semenovii* (Regel & Herd.) Rex	293754	USSR - Along hillside above Yalta	1963
A. grosseri var. *hersii* Rehd.	287103	England - Hillier & Sons, Winchester	1963
A. kawakamii var. *taitonmontanum* (Hayata) Li	324942	Taiwan - Below Lishan	1968
A. laxiflorum Pax	287104	England - Hillier & Sons, Winchester	1963
A. morrisonense Hayata	324941	Taiwan - On Tsu-shan	1967
A. rufinerve Sieb. & Zucc.	296010	Japan - Forest Expt. Station, Meguro, Tokyo	1964
A. sp.	314184	USSR - Chir Chik River, Rostondik Mountains	1966
Do.	324943	Taiwan - Between Lishan and Hohuan	1968
Achimenes grandiflora (Schiede) DC.	260703	Mexico - El Salto beyond Meco, San Luis Potosi	1959
Actinidia polygama (Sieb. & Zucc.) Maxim.	316959	Korea - Trail to Paek Tam Sa, Mt. Sorak	1966
A. polygama 'Kishmish'	305296	USSR - All-Union Institute, Leningrad	1965
Actinotus helianthii Labill.	255022	Australia - Sidney, New South Wales	1959
Adina pilulifera (Lam.) Franch.	237836	Japan - Mountain above Kurio, Yakushima	1956
Aesculus indica (Royle) Hook.	261214	England - Royal Botanic Gardens, Kew, Surrey	1959
Agapanthus sp.	270534	S. Africa - Klimmond, Caledon Dist., C. P.	1960
Agapetes sp.	243321	England - Caerhays Castle	1957
Agonis marginata Schau.	254928	Australia - Western Australia	1959
Allium thunbergii G. Don	318515	Korea - Trail to Paek Tam Sa, Mt. Sorak	1966
**Alnus formosana* (Burk.) Mak.	248154	Formosa - Through B. Mulligan, Wash. Arb., Seattle	1958
**A. hirsuta* Turcz.	317354	Korea - Mt. Kwan Ak, An Yang	1966

Plant	P.I. number	Source	Collected
Alnus hirsuta (con.)			
**A. hirsuta* Turcz. var. *hirsuta*	296011	Japan - Shimokita Peninsula, Northern Honshu	1964
**A. hirsuta* var. *tinctoria* Kudo	296012	Japan - Tsugaru Peninsula, Northern Honshu	1964
**A. inokumai* Murai & Kusaka	296015	Japan - Noheji, Aomori Pref., Northern Honshu	1964
**A. japonica* var. *arguta* Callier	296014	Japan - Shimokita Peninsula, Northern Honshu	1964
A. mayrii Call.	317356	Korea - Edge of road, Suwon	1966
A. nepalensis D. Don	307197	India - Lloyd's Botanic Garden, Darjeeling	1965
Aloe sp.	249090	Belgian Congo - South of Sa da Bandeira	1958
Do.	249091	Belgian Congo - San Miguel Fortress, Luanda	1958
Amelanchier asiatica (Sieb. & Zucc.) Endl. ex Walp.	317357	Korea - near College of Agr. campus, Suwon	1966
Amphilophium paniculatum (L.) HBK.	238888	Mexico - Road from Villa Flores to Cardenex, Arkose	1957
Anagyris foetida L.	234283	Israel - Dept. of Forests, Ilanoth, Nathanya	1956
Anigozanthos manglesii D. Don	254930	Australia - Western Australia	1959
Anthurium scandens (Aubl.) Engler	240614	Italy - Botanical Garden, Pisa	1957
A. scherzerianum Schott	237644	Costa Rica - Finca Las Concaras, Cartago	1957
**Araucaria angustifolia* (Bertol.) Kuntze	249685	Brazil - Fazenda da Bonita, Serra da Bocaina, Sao Paulo	1958
Arbutus peninsularis Rose & Goldman	262382	Mexico - Chihuahua, Sierra Mohivora	1959
Do.	262383	Mexico - Chihuahua, between Guadelupe and Tesolate	1959
**Ardisia crenulata* Lodd.	275053	Japan - Hanakawa-Kita-Ibaraki City, Ibaraki Pref.	1961
**A. japonica* (Thunb.) Blume	237842	Japan - Near Tachikawa, Tokyo-to	1957
Do.	275070	Japan - Ariadaka, Taira, Ibaraki Pref.	1961
Do.	275385	Japan - Above Ayukawa, Miyagi Pref.	1961
Do.	275502	Japan - Tsubakijima, near Shizukawa, Miyagi Pref.	1961
A. japonica 'Angusta'	274526	Japan - Takakuma, Osumi, Kyushu	1961
Ardisia sp.	237843-845	Japan - Yakushima, Miyanoura River, Manno Nat. Forest	1957
A. villosa Roxb.	235308	Japan - Wakayama, Shrine Forest, Shirahama	1956
Arisaema serratum var. *atropurpureum* Engl.	237846	Japan - Yakushima, mountain path above Kosugi-dani	1957
Arisaema sp.	237848	Japan - Anno, Tanegashima	1957
Do.	237849	Japan - Hirakiki Mountains	1957
Aristolochia cauliflora Ule	249436	Brazil - Botanical Garden, Rio de Janeiro	1958

Plant	P.I. number	Source	Collected
Aristolochia cymbifera Mart. & Zucc.	249437	---do---	1958
A. galeata Mart. & Zucc.	249438	---do---	1958
A. manshuriensis Komarov	316960	Korea - Paek Tam Sa, Mt. Sorak	1966
A. tagala Cham.	249440	Brazil - Botanical Garden, Rio de Janeiro	1958
Aruncus aethusifolius (Lev.) Nakai	317204	Korea - Mt. Kwan Ak, An Yang	1966
Asparagus schoberioides Kunth.	316689	Korea - Near Kan ja	1966
Aster spathuliofolius Maxim.	318518	Korea - North coast of Ullung-do	1966
Astilbe thunbergii Miq.	246759	Japan - Sendai, Miyagi Pref.	1958
Begonia semperflorens Link & Otto (8 vars.)	292728-735	Germany - Gustav Teichner, Poggenhagen	1963
**Belamcanda chinensis* (L.) DC.	285329	Nepal - Trail from Damdam to Bega	1962
Berberis sp.	217620	India - Dodo Betta Mts., Ootacamund	1954
B. trifoliolata Moric.	258354	Texas - Lynn Lowrey Nsy., Houston	1959
Berchemia racemosa Sieb. & Zucc.	235127	Japan - Mountains of central Japan	1956
Betula chinensis Maxim.	317208	Korea - Near summit of Mt. Sorak	1966
B. chinensis	317358	Korea - Near top of Mt. Kwan Ak, An Yang	1966
B. costata Trautv. ex Maxim.	316690	Korea - Mt. Tok-yu, Ko Chun	1966
**B. ermanii* Champ.	232008	Japan - Botanical Garden of Osaka	1956
Do.	316961	Korea - Top of Mt. Sorak	1966
Do.	317209-210	Korea - Mt. Halla, Cheju Island	1966
**B. grossa* Sieb. & Zucc.	296018	Japan - Miyasaki Pref., Kyushu	1964
**B. pendula* Roth	262712	USSR - Presented by Premier Khruschev	1960
Do.	314227	USSR - Bot. Gard., Tashkent, Fergana, Uzbekistan	1966
B. platyphylla var. *japonica* (Miq.) Hara	317211	Korea - Trail to Paek Tam Sa, Mt. Sorak	1966
B. tatewakiana Ohki & Watanabe	296019	Japan - Sarabetsu, Obihiro, Hokkaido	1964
Boehmeria biloba Wedd.	236017	Japan - Garden of Dr. H. Takeda, Tokyo	1956
Do.	239076	Spain - Botanical Garden, Madrid	1957
Brachycome multifida DC.	254753	Australia - B. E. Schubert's Nsy., Victoria	1959
Bredia hirsuta Blume	237850	Japan - Yakushima, Kosugi-dani	1957
Buphthalmum speciosum (Baumg.) Schreb.	253178	Yugoslavia - Northern slope of Shar Plannina	1958
Buxus liukiuensis Makino	226784	Okinawa - Kunigami-son	1955
B. microphylla Sieb. & Zucc.	240756	Italy - Botanical Garden, Genoa	1957
B. microphylla 'Suffruticosa'	276274	Japan - Hakone Shrine, Hotohakono	1961
B. microphylla var. *japonica* (Muell.-Arg.) Rehd. & Wils.	235776	Japan - Hana-no-ego- Yakushima	1956

Plant	P.I. number	Source	Collected
Buxus sempervirens L.	238013	France - R. Chenault Nsy., Orleans, Loiret	1957
B. sempervirens 'Agram'	255075	Macedonia - Near Skoplje, Vardas River Valley	1959
B. sempervirens 'Angustifolia'	242525	England - Talbot Manor, Fincham, Norfolk	1957
B. sempervirens 'Aurea-Pendula'	242518	---do---	1957
B. sempervirens 'Heinrich Bruns'	260383	Germany - H. Bruns Nsy., Westersted, Oldenburg	1959
B. sempervirens 'Myosotifolia'	242522	England - Talbor Manor, Norfolk	1957
B. sempervirens 'Myrtifolia'	76560	England - Aldenham House Gardens, Elstree, Herts	1928
B. sempervirens 'Pendula'	242523	England - Talbot Manor, Norfolk	1957
B. sempervirens 'Rosmarinifolia'	240528	Italy - Botanical Garden, Florence	1957
B. sempervirens 'Rotundifolia'	242519	England - Talbot Manor, Norfolk	1957
B. sempervirens 'Rotundifolia Maculata'	242520	---do---	1957
Buxus sp.	274869	Japan - Mt. Kosho in central Kyushu	1961
Do.	261849	Iran - Caspian Shore	1960
Callicarpa formosana Rolfe	324954	Taiwan - along river, Kanko	1967
C. japonica Thunb.	317359	Korea - Mt. Kwan Ak, An Yang	1966
C. japonica var. *angustata* Rehd.	239232	England - Royal Botanic Gardens, Kew	1957
C. macrophylla Vahl	240796	Italy - Stazione Sperimentale, San Remo	1957
Callistemon pachyphyllus Cheel	255036	Australia - Private garden, Brisbane	1959
C. phoeniceus Lindl.	254952	Australia - Greenhead Road west of Coorow	1959
Callistemon sp.	254993	Australia - Streamside near Rylston, New S. Wales	1959
Callitris cupressiformis Vent.	242031	Portugal - Parque da Penha, Serra da Sintra, near Lisbon	1959
Calothamnus chrysantherus F. Muell.	255037	Australia - Billercay, north of Kondinin	1959
C. homalophyllus F. Muell.	255038	Australia - Binni, north of Geraldton	1959
C. longissimus F. Muell.	255039	Australia - Southwest of Three Springs	1959
C. sanguineus Labill.	255041	Australia - Mullewa road out of Geraldton	1959
Calvoa orientalis Taub.	238510	Portugal - Jardim Botanico, Oporto	1957
Camellia (hybrid) 'Fragrant Pink'	315906	Maryland - USPIS, Glenn Dale	1966
C. fraterna Hance	162476	China - Lushen Botanic Garden, Kuling	1948
C. granthamiana Sealy	251534	Hong Kong - Gardens Div., Urban Services Dept.	1958
C. hongkongensis Seem.	229973	Hong Kong	1955
C. japonica L.	228024	Japan - Korakuen Garden, Okayama-shi	1955
Do.	230278	Japan - Aichi Prefect Hort. Expt. Station	1955
Do.	231695	Japan - School of Hort., Chiba Univ., Chiba	1956

Plant	P.I. number	Source	Collected
Camellia japonica L. (con.)	235314	Japan - Kyoto Univ. Exp. Forest, Oshima Island, Kushimoto, Wakayama	1956
Do.	235568	Japan - Mt. Rokko near Kobe City	1956
Do.	238870	Portugal - Palace Hotel garden, Bussaco	1957
Do.	261306	Portugal - Parque da Penha, Serra da Sintra, near Lisbon	1957
Do.	226109	Japan - Wooded slope of Oonami-ike	1955
Do.	246761-762	Japan - Tamaura near Sendai, Miyagi Pref.	1958
Do.	274797	Japan - Taradake, Nagasaki-ken, Kyushu	1961
Do.	276119	Japan - Garden of Matsumae Castle, Matsumae, Hokkaido	1961
Do.	274530-531	Japan - Takakuma Mts., Osumi, Kyushu	1961
Do.	274796,798	Japan - Stream bed on Taradake, Nagasaki-ken, Kyushu	1961
Do.	275054	Japan - Izura, Kita-Ibaraki City, Ibaraki Pref.	1961
Do.	275386	Japan - Niujama near Ayukawa, Miyagi Pref.	1961
Do.	275387	Japan - Ayukawa, at seacliff, Miyagi Pref.	1961
Do.	275505	Japan - Areshima near Shizukawa City, Miyagi	1961
Do.	275517	Japan - Cape Funakoshi, near Miyako, Iwate Pref.	1961
Do.	320532	Japan - Taradake, Nagaski-ken, Kyushu	1967
Camellia japonica 'Augusto Leal Gouveia Pinto'	238726	Portugal - Companhia Horticola, Oporto	1957
Do.	241932	---do---	1957
C. japonica 'Azuma Shirbori'	231857	Japan - School of Hort., Chiba Univ., Chiba	1956
C. japonica 'Bella Romana'	308984	France - Botanical Garden, Nantes	1965
C. japonica 'Beni-botan'	231858	Japan - School of Hort., Chiba Univ., Chiba	1956
C. japonica 'Beni tsubake'	276118	Japan - Matsumae Castle garden, Matsumae, Hokkaido	1961
C. japonica 'Bokuhan'	228130	Japan - Chinka Garden, Angyo, Saitama Pref.	1955
C. japonica 'Bon-shirotama'	227063	Japan - Tokuji Kai, Aichi Pref.	1955
C. japonica 'Dona Herzilia de Freitas Magalhaes'	241933	Portugal - Companhia Horticola Nsy., Oporto	1957
C. japonica 'Dona Jane Andresen'	239728	---do---	1957
Do.	241978	---do---	1957
Camellia japonica 'Dr. Baltazar de Melo'	238731	Portugal - Moreira da Silva et Fihlos Nsy., Oporto	1957

Plant	P.I. number	Source	Collected
Camellia japonica (con.)			
**C. japonica* 'Frost Queen'	352669	Maryland - Selected from P.I. 230728 at USPIS, Glenn Dale	1970
C. japonica 'Hagoromo'	320891	Japan - Nakahara Chyorakuen garden, Kurume City	1967
C. japonica 'Hana Guruma'	231685	Japan - School of Hort. Chiba Univ., Chiba	1956
C. japonica 'Hasumi-shiro'	231686	---do---	1956
C. japonica 'Il-Tramonto'	308996	France - Botanical Garden, Nantes	1965
C. japonica 'Kanyo-rai'	231859	Japan - School of Hort., Chiba Univ., Chiba	1956
C. japonica 'Kara-ito'	228132	Japan - Chinka Garden, Angyo, Saitama Pref.	1955
C. japonica 'Kominato'	230319	Japan - Aichi Pref. Hort. Sta., Kiyosu-cho	1955
Do.	227568	Japan - Kominato, Aomori Pref.	1955
Camellia japonica 'Komyotai'	231687	Japan - School of Hort., Chiba Univ., Chiba	1956
C. japonica 'Lady Hume's Blush'	238733	Portugal - Garden of Quinta de Meio, Porto	1957
C. japonica 'Le Lys'	309001	France - Botanical Garden, Nantes	1965
C. japonica 'Leon Leguay'	309003	---do---	1965
C. japonica 'Leviathan'	311500	Australia - Theodore C. Ruckert, Myrtle Bank	1966
C. japonica 'Madame Martin Cachet'	309006	France - Botanical Garden, Nantes	1965
C. japonica 'Mathotiana'	238499	Portugal - Jardim Botanico, Porto	1957
C. japonica 'Momiyi-gari'	231861	Japan - School of Hort., Chiba Univ., Chiba	1956
C. japonica 'Montelanc'	309011	France - Botanical Garden, Nantes	1965
C. japonica 'Montironi'	309012	---do---	1965
C. japonica 'Moshio'	231689	Japan - School of Hort., Chiba Univ., Chiba	1956
C. japonica 'Nakifude'	231690	---do---	1956
C. japonica 'Oranda-beni'	231862	---do---	1956
C. japonica 'Osotake'	276121	Japan - Matsumae Castle garden, Matsumae, Hokkaido	1961
C. japonica 'Picturata'	309014	France - Botanical Garden, Nantes	1965
C. japonica 'Portuense'	241931	Portugal - Companhia Horticola Nsy., Oporto	1957
C. japonica 'Princeza Real'	238727	Portugal - Garden of Quinta da Meio, Oporto	1957
Do.	241977	---do---	1957
Camellia japonica 'Rainha Santa Isabel'	241934	Portugal - Moreira da Silva et Fihlos Nsy., Oporto	1957
C. japonica 'Saudade de Martins Branco'	241979	Portugal - Companhia Horticola Nsy., Oporto	1957
C. japonica 'Seihi'	227062	Japan - Rokuji Kai, Aichi Pref.	1955
C. japonica 'Shiro-botan'	231691	Japan - School of Hort., Chiba Univ., Chiba	1956
C. japonica 'Shiro-byoski'	231692	---do---	1956

Plant	P.I. number	Source	Collected
Camellia japonica (con.)			
C. japonica 'Tsubake'	274700	Japan - Hiyashi Farm, Ushiro-Bira, Hirado	1961
C. japonica 'Utamakura'	231694	Japan - School of Hort., Chiba Univ., Chiba	1956
C. japonica 'Yamato Nishiki'	320894	Japan - Kurume Branch Hort. Expt. Sta., Kurume	1967
C. japonica var. *hozanensis* (Hay.) Yamamoto	229880	Okinawa - Tobaru-Yama Mt., Genka Haneji-Son	1955
C. japonica var. *macrocarpa* Masamune	231055	Okinawa - Ryuku U.S. Civil Admin.	1956
C. japonica kissi Wall.	252064	Nepal - C. N. Gibb, Agency for Internatl. Devlpmt.	1958
C. japonica lutchuensis T. Ito	226756	Okinawa - hillside, Hentora-yama, Kunigami	1955
C. japonica miyagii (Koidz.) Makino & Nemoto	231057	Okinawa - Ryuku U.S. Civil Admin.	1956
Do.	226704	Okinawa - Ukudan-shiri-yama, Oenka	1955
Camellia japonica nokoensis Hayata	324955	Taiwan - Route to Mt. Hohuan	1968
C. japonica oleifera Abel	162561	China - Botanic Garden, Sun Yat-sen Memorial Park Commission, Nanking	1948
Do.	235500	Japan - Kyoto Univ. Expt. Forest, Oshima, Kishimoto, Wakayama-ken	1956
Camellia reticulata Lindl.	243861	England - Caerhays Castle, Cornwall	1957
Do.	244721	---do---	1957
Camellia rusticana Honda	228195-198	Japan - Niigata - wild seedling selection	1955
Do.	229805	Japan - Lake Tazawa, Akita Pref.	1955
Do.	230081	Japan - Faculty of Agr., Univ. of Tokyo, Hongo	1955
Do.	228190	Japan-- Niigata	1955
Do.	233639	Japan - Through Univ. of Tokyo	1956
Do.	233641	---do---	1956
Do.	233640	---do---	1956
Do.	233642-643	---do---	1955
Camellia rusticana 'Aga'	228192	Japan - Niigata	1955
C. rusticana 'Hatano'	228188-189	---do---	1955
C. rusticana 'Tsugawa'	228184	---do---	1955
C. rusticana 'Yamaya'	228185	---do---	1955
C. rusticana 'Yoshida'	228187	---do---	1955
C. saluenensis Stapf	243862	England - Caerhays Castle, Cornwall	1957
C. sasanqua Thunb.	228025	Japan - Kotohira-eho, Kagana Pref.	1955

Plant	P.I. number	Source	Collected
Camellia sasanqua Thunb. (con.)	228026	Japan - Korakuen Garden, Okayama-shi	1955
Do.	233637	Taiwan	1956
Do.	235249	Japan - Between Shimizu and Nakamura, Tosa-ken	1956
Do.	235250-255	Japan - Zozusan, Kotohira, Kagawa-ken	1956
Do.	235256	---do---	1956
Do.	235422	---do---	1956
Do.	237854	Japan - Along Miyanoura River, Manno National Forest, Yakushima	1957
Do.	227626	Japan - Yamamoto Nsy., Yamamoto City, Hyogo Pref.	1955
Do.	238734	Portugal - Moreira da Silva Nsy., Porto	1957
Do.	249450	Brazil - Botanical Garden, Rio de Janeiro	1957
Do.	258358,360	Taiwan - Botanical Garden on Yang Ming Shan near Taipei	1959
C. sasanqua 'Fuji-no-mine'	227623	Japan - Yamamoto Nsy., Yamamoto City, Hyogo Pref.	1955
C. sasanqua 'Jaune'	231621	Portugal - A. Moreira da Silva & Filhos Nsy.	1956
C. sasanqua 'Kanjiro'	227064	Japan - Rokuji Kai, Aichi Pref.	1955
C. sasanqua 'Shishi Gashira'	227622	Japan - Yamamoto Nsy., Yamamoto City, Hyogo Pref.	1955
C. sasanqua 'Tuki-no-kasa'	236221	Japan - Nakada Nsy., Angyo-Oowaza, Kawaguchi City	1957
C. sinensis (L.) Ktze.	249451	Brazil - Botanical Garden, Rio de Janeiro	1958
Do.	304404-405	Yugoslavia - Originally from Cakva, Gruziya, USSR	1965
C. sinensis 'Rosea' ('Beni-bana-cha')	236247	Japan - Nakada Nsy., Angyo-Ooaza, Kawaguchi City	1957
C. sinensis 'Tama midori'	235570	Japan - Natl. Tea Expt. Sta., Kanaya, Shizouka-ken Pref.	1956
C. sinensis 'Y-2'	235572	---do---	1956
C. sinensis 'Yabukita'	235569	---do---	1956
Do.	236357	---do---	1957
Camellia sinensis 'Yaeho'	236358	---do---	1957
Camellia sp.	233638	Taiwan	1956

Plant	P.I. number	Source	Collected
Camellia sp. (con.)			
Camellia sp. No. 1 & No. 2	233635-636	Taiwan	1956
Camellia x *williamsii* W. W. Smith 'November Pink'	277764	England - Hillier & Sons, Winchester	1961
Campanula takesimana Nakai	318520	Korea - Above To Dong, Ullung-Do	1966
Canavalia obtusifolia (Lam.) DC.	237856	Japan - Onoaida, Yakushima	1957
Canna (hybrid) 'Moonlight'	293878	USSR - Nikita Botanic Garden, Yalta	1963
Carex fusanensis Ohwi	318521	Korea - Garden of Prof. Tschang Bok Lee, Suwon	1966
Carissa grandiflora (E. Mey.) DC.	249452	Brazil - Botanical Garden, Rio de Janeiro	1958
Carpinus kawakamii Hayata	324959	Taiwan - Between Lishan and Hohuan	1967
Cassia appendiculata Vog.	249453	Brazil - Botanical Garden, Rio de Janeiro	1958
C. australis var. *revoluta* (F. Muell.)	235522	Australia - Botanic Garden, Adelaide	1956
C. fastuosa Vog.	249454	Brazil - Botanical Garden, Rio de Janeiro	1958
C. latistipula Benth.	249457	---do---	1958
Cassia sp.	249117	Brazil - Sao Paulo	1958
Do.	260707	Mexico - Jacala, Hidalgo	1959
Castanopsis carlesii (Hemsl.) Hayata	324961	Taiwan - Lin-hua-chi Forestry Station	1967
Castanospermum australe Cunn. & Fraser	246427	Brazil - Botanical Garden, Rio de Janeiro	1958
Catalpa ovata Don	228027	Japan - Matsuyama Castle, Matsuyama	1955
Cautleya lutea Royle ex Hook. f.	307220	India - Batasi to Manibanjang trail, West Bengal	1965
Celastrus articulatus Thunb.	316963	Korea - Mt. Sorak	1966
Celastrus sp.	324963	Taiwan - Along track to Mt. Hohuan	1967
C. stylosus Wall.	285339	Nepal - Near Dhaman	1963
Celtis caucasica Willd.	260881	USSR - Signag, Georgia	1959
C. sinensis Pers.	317213	Korea - East of Cheju City	1966
Celtis sp.	260882	USSR - Ukrainskaya	1959
Cerastium Purpurascens Adams	253489	Italy - Terminillo	1958
Cercis siliquastrum L.	206422	Turkey - State nursery near Malatya	1953
Do.	206951	Turkey - Mugla, north of Kemer	1953
Do.	211910	Turkey - Through American Embassy, Tehran	1953
Chamaecyparis obtusa (Sieb. & Zucc.) Endl.	235130	Japan - Yatsugatake Mts., above Shibuya Onsen	1956
C. pisifera (Sieb. & Zucc.) Endl. 'Alba Picta'	236222	Japan - Nakada Nsy., Angyo, Kawaguchi	1957
Chamaecyparis sp.	248156	Taiwan - Through Brian Mulligan, Wash. Arb., Seattle	1958

Plant	P.I. number	Source	Collected
Chasmanthe aethiopica (L.) N.E. Br.	241026	Italy - Domenico Arcardi Garden, San Remo	1957
Do.	241483	Italy - La Mortola, Villa Hanbury	1957
Chimonanthus praecox (L.) Link	241484	---do---	1957
Chlorophytum bichetti (S. Karrer) Backer	242608	England - Talbot Manor, Kings Lynn, Fincham	1957
Chrysanthemum (hybrid) 'Autumn'	273223	Taiwan - National Taiwan Univ., Taipei	1961
C. (hybrid) 'Autumn Hat'	273222	---do---	1961
C. (hybrid) 'Autumn in the Shieh's'	267196	---do---	1961
C. (hybrid) 'Buddhist Priest's Gown'	286136	---do---	1963
C. (hybrid) 'Orange Sweetheart'	286137	England - Frampton's, Chichester	1963
C. (hybrid) 'Seiki-no-hanna'	236185	Japan - S. Takahaski, Ki-Machi, Mishima-City	1956
C. (hybrid) 'Tomari'	236036	Japan - Shinjuku Imperial Garden, Tokyo	1956
C. (hybrid) 'Yukin'	236039	---do---	1956
C. (hybrid) 'Yushan'	273221	Taiwan - National Taiwan Univ., Taipei	1961
Chrysanthemum 158 hybrid varieties		Japan	1956-60
Chrysanthemum articum L.	261066	Netherlands - Private garden in Wageningen	1959
C. sibiricum Turcz.	318524	Korea - Mt. Sokni, Chunchong Pukto	1966
C. zawadskii Herbich	318525	Korea - Taek Wal Yong Mts., Kangwan Do	1966
Cinnamomum brevifolium Miq.	237857	Japan - Yakushima, Seacoast-Ambo to Miyanoura	1957
C. daphnoides Sieb. & Zucc.	246661	Japan - Agr. Expt. Farm, Tanegashima	1958
C. japonicum Sieb.	246662-663	---do---	1958
Do.	246665-666	---do---	1958
Cissus discolor Blume	247189	Brazil - Chacara, Santa Rosa	1958
Clappertonia ficifolia (Willd.) Dcne.	249460	Brazil	1958
Clematis commutata Kuntze	249095	Africa - Angola, near Humpata	1958
C. crassifolia Benth.	240738	Japan - Tanegashima, Tatsumoto Nat'l. Forest	1957
C. paniculata Thunb.	235748	Japan - Tomaiko, Yakushima	1956
Clerodendron sp.	285370	Nepal - Rakhu	1962
Clethra barbinervis Sieb. & Zucc.	316047	Japan - Kusatsu, Gumma Pref., Central Honshu	1966
C. monostachya Rehd. & Wils.	287106	England - Hillier & Sons, Winchester	1963
Cleyera japonica Thunb.	237917	Japan - Tachimoto National Forest, Tanegashima	1956
Do.	324965	Taiwan - Above Sun-shi	1967
Cneorum tricoccon L.	239066	Spain - Garden of Marimurtra, Prov. Gerona	1957
Coccocypselum cordatum Krause	249461	Brazil - Rio de Janeiro	1958
Cochliostema jacobianum C. Koch & Linden	259128	Costa Rica - Coll. by E. P. Imle in the wild	1959

Plant	P.I. number	Source	Collected
Coleus blumei var. *verschaffeltii* Lem. 34 varieties	249769-773	England - S. Pedley & Sons, Lancashire	1958
	249775		
	249777-788		
	249790-800		
	249802-803		
	249806-807		
	251601		1959
Coleus lanuginosus Hochst. ex Benth.	280728	Ethiopia - West of Fiche, Shoa Province	1962
Cordia superba Cham.	246466	Brazil - Botanical Garden, Rio de Janeiro	1958
Cornus controversa Hemsl.	316616	Korea- Mt. Sorak, Kangwan Do	1966
C. coreana Wanger.	317222	Korea - Mt. Halla, Cheju Island	1966
Do.	316694	Korea - Road from Ko Chun to Muu Ju	1966
Cornus kousa Hance	317223	Korea - Mt. Halla, Cheju Island	1966
Do.	316695	Korea - Trail to Mt. Tok-yu, Ko Chun	1966
Cornus mas L.	203237	Turkey - Lake Aband, Bolu	1952
Do.	293772-773	USSR - Black River, Crimea	1963
Do.	293775	USSR - Kholorash Region Forest	1963
**Cornus sanguinea* L.	293777	USSR - Strashensky Forest, Kholorash Region Moldavia	1963
Correa decumbens F. Muell.	254756	Australia - Schubert's Nsy., Noble Park, Victoria	1959
Corylopsis spicata Sieb. & Zucc.	235423	Japan - Kochi, Kochi-ken, Shikoku	1956
Cotinus coggygria Scop.	293780	USSR - Kholorash Region, Moldavia	1963
Do.	323962	USSR - L. T. Bobro, Pyatiborsk, Stavropol	1967
Cotoneaster (hybrid) 'Cornubia'	243957	England - Exbury House, Exbury	1957
C. acuminata Lindl.	285426	Nepal - Mt. Furkai	1962
**C. frigida* Wall. ex Lindl.	285389	---do---	1962
Do.	285390	Nepal - Above Nardi Khola	1962
Cotoneaster integerrima Medic.	300571	USSR - Botanical Garden, Kabardino-Balkarian State Univ., Nalchik	1964
C. lucida Schlecht.	313962	USSR - Botanical Garden, Stavropol	1966
**C. microphylla* Wall. ex Lindl.	274972	India - Near Chandawari	1961
Do.	285323	Nepal - Trail from Ulleri to Sikha	1962

Plant	P.I. number	Source	Collected
**Cotoneaster microphylla* Wall. ex Lindl. (con.)	285343	Nepal - Mt. Furkai	1962
Do.	307237	India - Near Sandakphu, West Bengal	1965
Cotoneaster morrisonensis Hayata	324966-968	Taiwan - Mt. Morrison and Mt. Hohuan	1968
C. racemiflora (Desf.) K. Koch	313964	USSR - Botanical Garden, Stavropol	1966
Crataegus aestivalis (Walt.) Torr. & Gray	248492	Texas - L. Lowrey Nsy., Houston	1958
C. microphylla K. Koch	293785	USSR - Big Chuchel Mountains	1963
Crinum asiaticum var. *japonicum* Baker	235504	Japan - Oshima Island, Wakayama Pref.	1956
Cryptomeria japonica (L.f.) D. Don	239487	Japan - Kagoshima-ken	1957
Do.	279746	Japan - Owani, Aomori Pref.	1962
Do.	279748	Japan - Tono, Iwate Pref.	1962
Cunninghamia lanceolata (Lamb.) Hook.	324969	Taiwan - Near Wushi, road to Mt. Hohuan	1967
Cyanotis cristata D. Don	238684	Portugal - Jardim Botanico, Porto	1957
C. kewensis C. B. Clarke	240536	Italy - Botanical Garden, Florence	1957
Cyrilla racemiflora L.	102244	England - Keeper's Hill Nsy., Dorset	1933
Cytisus x *praecox* Wheeler ex Bean	259896	Netherlands - Boskoop Expt. Station	1959
**Damnacanthus indicus* Gaertn. f.	227920	Japan - Kiyozumi-yama	1955
Do.	237861	Japan - Yakushima	1957
Do.	274764	Japan - Ushira-bira, Hirado Island, Kyushu	1961
Do.	275494	Japan - Kashima Shrine, Ibaraki Pref.	1961
**D. microphyllus* var. *giganteus* Koidz.	235317	Japan - Gegu Shrine Forest, Ise City, Mie Pref.	1956
Dendropanax sp.	227976	Japan - Igahi, near Matsuyama, Ehime Pref.	1955
Deutzia pulchra Vidal	324971	Taiwan - Trail to Ta-shan	1967
Dianthus superbus L.	229517	Japan - Abashiri, Kitami, Hokkaido	1955
Dichroa febrifuga Lour.	285350	Nepal - Near Daurali	1962
Dierama pulcherrima (Hook. f.) Baker	299589	S. Africa - Botanic Garden, Newlands, Cape Province	1964
Disporum sessile (Thunb.) Don ex Roem. & Schult.	317364	Korea - Garden of Prof. Tchang Bok Lee, Suwon	1966
Dodonaea viscosa (L.) Jacq.	240610	Mexico - Sierra west of Montezuma, Sonora	1957
Echeveria affini E. Walt.	197677	Mexico	1951
Ehretia anacua (Teran & Berland.) Johnst.	255076	Texas - Lynn Lowrey Nsy., Houston	1958
Eleagnus crispa Thunb.	237867	Japan - Yakushima, Road Isso to Miyanoura	1957
Elettaria cardamomum (L.) Maton	245967	Mexico - Finca La Rioja, Chiapas	1958
Erica australis L.	241898	Portugal - East of Coimbra	1957
E. umbrellata L.	241899	Portugal - West of Coimbra	1957

Plant	P.I. number	Source	Collected
Eucalyptus (hybrid)	254995	Australia - Waite Agr. Inst., Adelaide	1959
E. bicolor A. Cunn. ex Hook.	254996	Australia - Murray River bank, Loxton	1959
E. campaspe S. L. Moore	255064	Australia - Western Australia	1959
E. marginata J. E. Smith	255066	---do---	1959
E. niphophila Maiden & Blakely	220246	Australia - Mt. Koscuisko	1954
E. orbifolia F. Muell.	254936	Australia - North of Southern Cross	1959
E. simmondsii Maiden	254677	Tasmania - Mount Arrowsmith	1958
Euonymus bullatus Wall.	285354	Nepal - Godavari	1962
E. echinatus Wall.	285338	Nepal - Near Posti above Mardi Khola	1962
Do.	324972	Taiwan - Top of Tsu-shan	1967
Do.	324973	Taiwan - Below Lishan	1967
**E. fortunei* (Turcz.) Hand.—Mazz. 'Longwood'	275073	Japan - Tsukuba, Ibaraki Pref.	1961
E. fortunei 'Radicans Gracilis'	226116	Japan	1955
E. fortunei var. *radicans* (Miq.) Rehd.	318528	Korea - Teu-Dong, Ullongdo	1967
E. grandiflorus Wall. ex Roxb.	285352	Nepal - Botanic Garden, Godavari	1962
E. japonicus Thunb.	318529	Korea - Hotel garden Chong Ju	1967
E. pallidifolia Hayata	324974	Taiwan - Near Mt. Morrison	1968
E. wilsonii Sprague	242274	Scotland - Royal Bot. Gardens, Edinburgh	1957
Eurya crenatifolia (Yamamoto) Kobuski	324975	Taiwan - Below Lishan	1967
E. emarginata (Thunb.) Makino	235425	Japan - Muroto-zaki, Kochi-ken, Shikoku	1956
**E. emarginata* var. *microphylla* Makino	240914	Japan - Kyusyu Agr. Expt. Sta., Kurume, Fukuoka	1957
**E. japonica* Thunb.	237871	Japan - Mountains above Kosugi-dani, Yakushima	1957
**E. japonica* var. *nitida* (Korth.) Dyer	244945	Louisiana - McIlhenny Estate, Avery Island	1958
**E. ochnacea* (DC.) Szysz.	235502	Japan - Kumano Shrine, Nachi-san, Wakayama Pref.	1956
Exochorda tianschanica Gontsch.	293794	USSR - Tien Shan Mts., Uzberistan	1963
**Fatsia japonica* (Thunb.) Decne. & Planch.	275496	Japan - Taira City, Ibaraki Pref., Honshu	1961
Ficus capensis Thunb.	240111	Sicily - Botanical Garden, Palermo	1957
F. princeps Kunth & Bouché	240619	Italy - Botanical Garden, Univ. Pisa	1957
F. pumila L.	235261	Japan - Muro to-zaki, Kochiken	1956
F. racemosa var. *elongata* (King) Barrett	249537	Japan - Expt. Forest Sta., Kyoto Univ.	1958
Firmiana simplex (L.) W. F. Wight	317365	Korea - Buddhist Temple grounds, Suwon	1966
Forsythia ovata Nakai	316967	Korea - Near Sorak Dong, Kangwando	1966
Do.	318532	Korea - Kangwando	1967

Plant	P.I. number	Source	Collected
Forsythia ovata Nakai (con.)	319533	Korea - Mt. Sorak, Kangwando	1967
Forsythia sp.	317229	Korea - Forest Expt. Station, Seoul	1966
F. viridissima var. *koreana* Rehd.	318530-531	Korea - Agr. College campus, Seoul National Univ., Suwon	1967
Gardenia jasminoides Ellis	324977	Taiwan - Forest in Lin-hua-chi	1967
G. lucida Roxb.	249466	Brazil - Botanical Garden, Rio de Janeiro	1958
G. radicans Thunb.	226118	Japan - Hort. Field Station, Kurume	1955
Do.	227641	Japan - Yamamoto Nsy., Yamamoto City, Hyogo Pref.	1955
Gaultheria cuneata (Rehd. & Wils.) Bean	231135	England - Royal Hort. Soc., Wisley, Surrey	1956
G. fragrantissima Wall.	285357	Nepal - Near Dhaman	1962
G. itoana Hayata	231136	England - Royal Hort Soc., Wisley, Surrey	1956
G. miqueliana Takeda	231137	---do---	1956
G. shallon Pursh	231139	---do---	1956
Genista sp.	249690	Spain - Parque do Caso Campo, Madrid	1958
G. virgata Link	242276	Scotland - Edinburgh Botanic Garden	1957
Gladiolus blandus Ait.	299974	Africa - Bloom Erf Nurs., Stellenbosch, Cape Prov.	1964
Do.	299975	Africa - Kirstenbosch Bot. Gard., Newlands Prov.	1964
G. brevifolius Jacq.	299976	---do---	1964
G. carmineus C.H. Wright	299977	---do---	1964
G. gracilis Jacq.	299978	Africa - Caledon Wild Flower Gard., Caledon, Cape Prov.	1964
G. mortonius Herb. ex Hook.	299980	---do---	1964
G. psittacinus Hook.	299981	Africa - H. F. Wood, Hermanus, Cape Prov.	1964
G. tristis L.	299984	Africa - Caledon Wild Flower Gard., Caledon, Cape Prov.	1964
Gordonia axillaris (Roxb.) Dietr.	324982	Taiwan - Between Lishan and Hohuan	1967
Grewia asiatica L.	220407	Pakistan - D. T. Painter, American Lahore Consulate	1954
Grevillea banksii R. Br.	249467	Brazil - Botanical Garden, Rio de Janeiro	1958
Gymnosporia royleana M. Laws.	285517	Nepal - Marchhapuchhare	1962
Haemanthus multiflorus Martyn ex Willd.	279832	Ethiopia - Bank of Baco River, Illubabor Prov.	1962
Hartia sinensis Dunn.	243325	England - Caerhays Castle, Cornwall	1957
Do.	244720	---do---	1957
Hedera helix L.	293883	USSR - Hills above Yalta	1963
H. helix 'Bulgaria'	244684	Bulgaria - Rila Monastery	1957
H. helix var. *crenata* (Hibb.) Rehd.	295100	New York - Brooklyn Botanic Garden	1942

Plant	P.I. number	Source	Collected
Hedera helix var. *poetica* Weston	239247	France - Lawrence Johnston Garden, Menton	1957
H. rhombea (Miq.) Bean	242278	Scotland - Royal Botanic Garden, Edinburgh	1957
Do.	318540	Korea - Cheju Island	1966
Hedychium coccineum Buch.-Ham. ex Smith	307263	India - Lloyd's Botanic Garden, Darjeeling	1963
H. gardnerianum Roscoe	307264	---do---	1963
H. spicatum Bich.-Ham.	237458	Burma - Meadow, elevation 7,000 feet	1957
Do.	307265	India - Lloyd's Botanic Garden, Darjeeling	1965
Hedychium sp.	307266	India - West Bengal, below Ramam	1965
Heliconia sp.	237968	Guatemala - Below Finac La Hulera, Cuyotenango	1957
Hemerocallis coreana Nakai	316602	Korea - Mt. Chiri, Cholla Namdo Prov.	1966
Do.	316702	Korea - Temple on Mt. Tok-yu, Ko Chun	1966
Hemerocallis sp.	316617	Korea - Base of Mt. Sorak, Kangwando	1966
Holboellia latifolia Wall.	285358	Nepal - Between Damdam and Bega	1962
Hydrangea aspera Buch.—Ham. ex D. Don	285360	Nepal - Mt. Furkai	1962
H. chinensis Maxim.	324984	Taiwan - Above road at Wushi	1967
H. integrifolia Hayata ex Matsum. & Hayata	324985	Taiwan - Above Lishan	1967
H. involucrata Sieb. 'Tama-azisai'	227922	Japan - Kyuosumi-yama, Prov. Awa, Chiba	1955
H. paniculata Sieb.	235134	Japan	1956
H. scandens Maxim.	226119	Japan - Mt. Kojigoka, Kyushu	1955
Hypericum ascyron L.	317233	Korea - Trail up Mt. Sorak	1966
H. hookerianum Wight & Arn.	307270	India - Road to Sandakphu, West Bengal	1965
Do.	307271	India - Tonglu Sandakphu, West Bengal	1965
Do.	307272	India - Lloyd's Botanic Garden, Darjeeling	1965
H. oblongifolium Choisy	285362	Nepal - Between Damdam and Bega	1962
Do.	285364	Nepal - Above Dhaman	1962
H. patulum Thunb.	285363	Nepal - Above Mardi Khola	1962
H. patulum Thunb. 'Hidcote Gold'	247782	England - Geoffrey Hayes Ltd., Westmoreland	1958
Hypericum sp.	324986	Taiwan - Mt. Alishan	1967
Hypoestes phyllostachya Baker	241204	Italy	1957
**Ilex* (hybrid) 'Albert Close'	331202	Maryland - Selected at USPIS, Glenn Dale	1968
**I.* (hybrid) 'William Cowgill'	331203	---do---	1968
**I.* (hybrid) 'Howard Dorsett'	331204	---do---	1968
**I.* (hybrid) 'Edward Goucher'	331205	---do---	1968
**I.* (hybrid) 'Harry Gunning'	331206	---do---	1968

Plant	P.I. number	Source	Collected
Ilex (hybrid) 'John T. Morris'	267825	National Arboretum - Selected by H. T. Skinner	1960
I. (hybrid) 'Lydia Morris'	267824	---do---	1960
I. x *altaclarensis* Dallim. 'Wilsonii'	241325	France - Villa Thuret, Alpes-Maritime	1957
I. cassine Walt.	254592	England - Hillier & Sons, Winchester	1958
I. crenata Thunb.	231948	Japan - Kyushu Agr. Expt. Sta., Kurume Fukuo-ka	1956
Do.	274870	Japan - Mt. Kosho, Central Kyushu	1961
Do.	275056	Japan - Near Kisara Village, Ibaraki Pref.	1961
Do.	275077	Japan - Mt. Tsukuba, Ibaraki Pref.	1961
Do.	275850	Japan - Near Yachi Onsen, Aomori Pref.	1961
Do.	276081	Japan - Along Horomon River, Hidaka, Hokkaido	1961
Do.	276112	Japan - Shikotsu Mountain, Hokkaido	1961
Do.	279006	Japan - Takakuma Expt. Forest of Kagoshima Univ., Osumi Pref.	1962
Ilex crenata 'High Light'	316588	National Arboretum - Selected by W. F. Kosar	1966
I. crenata 'Shiro-fukurin'	236020	Japan - Nakada Nsy., Angyo	1956
I. crenata 'Kiiro-fukurin'	236021	---do---	1956
I. crenata var. *fukasawana* Makino	274539	Japan - Mt. Takakuma, Osumi Peninsula, Kyushu	1961
I. crenata f. microphylla Rehd.	317234-235	Korea - Mt. Halla, Cheju Island	1966
I. crenata var. *nummularia* (Franch. & Sav.) Yatabe	244653	England - Waithman Nurs., Lancaster	1957
I. crenta var. *paludosa* (Nakai) Hara ex Ohwi *(= crenata* var. *radicans)*	227569,576	Japan - Collected in the wild	1955
Do.	269256	---do---	1960
Do.	275788-790	---do---	1961
Do.	275792-795	---do---	1961
Do.	275851	---do---	1961
Do.	275853-856	---do---	1961
Do.	276079-080	---do---	1961
Do.	276082	---do---	1961
Do.	276129,162	---do---	1961
Ilex excelsa (Wall.) Hook. f.	285365	Nepal - Above Godavari	1962
I. ficoidea Hemsl.	243261	England - G. H. Johnstone Garden, Cornwall	1957

Plant	P.I. number	Source	Collected
Ilex georgei Comber	277771	England - Hillier & Sons, Winchester	1961
I. glabra f. *leococarpa* F. W. Woods	275847	Florida - Gulf Coast Res. Center, Mariana	1961
I. hanceana Maxim.	237875	Japan - Tanegashima	1957
I. integra Thunb.	235508	Japan - Ashizurizaki Natl. Forest, Shikoku	1956
I. intricata Hook. f.	307276	India - Mt. Tonglu, West Bengal	1965
I. x *kuisiana* Natasima	274837	Japan - Taradake, Nagasaki-ken, Kyushu	1961
I. leococlada Makino	276132	Japan - Enosato Reg. Forest, Oshima, Hokkaido	1961
I. liukiuensis Loes.	237877,880	Japan - Isso River, Yakushima Island	1956
I. x *makinoi* Hara	275796	Japan - O-Take, Aomori Pref.	1961
Do.	275797	Japan - On Osore-san, Aomori Pref.	1961
I. melanotricha Merr.	261216	England - Exbury House, Hants	1959
Do.	261235	England - Hillier & Sons, Winchester	1959
I. montana var. *macropoda* (Miq.) Fern.	260387	Japan - Shimokita Pen., Province Mutsu	1959
Do.	296020	Japan - Forest Expt. Sta., Neguro, Tokyo	1964
Do.	316703	Korea - Mt. Sok Ni	1966
Do.	316704	Korea - Mt. Tok Yu, Ko Chun	1966
I. mutchagara Makino	235574,583	Japan - Kyoto Univ. Bot. Garden, Kyoto	1956
I. nobilis Gumbleton (=insignis)	243267,865	England - Caerhays Castle Garden, Cornwall	1957
I. paraguariensis St. Hil.	279952	Argentina - Secretary of Agriculture, Buenos Aires	1962
I. pubescens Hook. & Arn.	276340	Hong Kong - Hong Kong Botanic Garden	1961
Do.	324987	Taiwan - Kanko	1968
Do.	324988	Taiwan - Sun-Moon Lake	1968
I. rotunda Thunb.	237879	Japan - Yakushima	1957
Do.	274765	Japan - Kurume, Fukuoka-ken, Kyushu	1961
I. rugosa Fr. Schmidt.	227484	Japan - Near Nemuro	1955
Do.	275798-799	Japan - Osore-san, Aomori Pref., Honshu	1961
Do.	275858	Japan - Mt. O-take, Aomori Pref.	1961
Do.	276083	Japan - Shikotsu, Hokkaido	1961
Do.	276084	Japan - Hidaka, Hokkaido	1961
I. serrata var. *sieboldii* Loes.	235509	Japan - Shingu City, Mie Pref.	1956
I. sugerokii Maxim.	230455	Japan - Collected in the wild	1955
Do.	260389	---do---	1959
Do.	275800-808	---do---	1961
Do.	275859-862	---do---	1961

Plant	P.I. number	Source	Collected
Ilex sugerokii Maxim.			
Do.	276085	Japan - Collected in the wild	1961
Do.	276134,164	---do---	1961
I. sugerokii var. *brevipedunculata* (Maxim.) S. Y. Hu	269258	---do---	1960
Incarvillea sp.	223267	Afghanistan - Trail to Yakatal, Badakhshan	1955
Iris alata Poir.	238952	Portugal - Near Venda do Brasil, SE of Condeixa	1957
I. ensata Thunb.	317236	Korea - Mun Jae Hill between Jin Bu & Hoeng Song	1966
I. ensata var. *spontanea* (Makino) Nakai	306053	Japan - Kusatsu, Gumma Pref., Central Honshu	1966
Do.	318550	Korea - Mt. Halla, Cheju Island	1966
I. laevigata Fisch.	316629	Korea - Seoul Natl. Univ. Coll. of Agr., Suwon	1966
I. rossii Baker	316648	Korea - 5 km from Suwon	1966
I. sisyrinchium L.	238954	Portugal - Near Venda do Brasil, SE of Condeixa	1957
I. sp.	212308	Afghanistan - Bamian	1954
Do.	249481	Brazil - Horta Mannequinho Lopes, Sao Paulo	1958
Do.	250061	Yugoslavia - Lake Prespa, Macedonia	1958
Do.	285366-367	Nepal - Mt. Furkai	1962
Do.	317237	Korea - Sorak Dong, Kangwando	1966
I. spuria L.	206687	Turkey - Harisi Farm, Eskisehir	1953
Jasminum capense Thunb.	240037	Sicily - Bot. Gard., Univ. of Palermo, Palermo	1957
J. odoratissimum L.	238775	Portugal - Botanical Garden, Coimbra	1957
J. polyanthum Franch.	239375,481	France - Jardin Botanique "Les Cedres", Alpes-Maritimes	1957
Juniperus chinensis L. 'Tama-ibuki'	236236	Japan - Nakada Nsy., Angyo, Kawaguchi	1957
J. chinensis f. *aurea* (Young) Beissn.	319296	Korea - Forest Expt. Sta., An Yang	1966
J. chinensis var. *sargentii* Henry	317238	Korea - Mt. Halla, Cheju Island	1966
Do.	318558	---do---	1966
J. procera Hochst. ex Endl.	241376	Ethiopia - Agency for Internatl. Devlpmt., Addis Ababa	1957
Kadsura japonica (L.) Juss.	237883	Japan - Along Nagata River, Yakushima	1956
Keteleeria davidiana (Bertrand) Beissn.	324993	Taiwan - Lin-hua-chi Forestry Station	1968
Kohleria (hybrid) 'Longwood'	238875	Portugal - Botanical Garden, Coimbra	1957
Lagerstroemia subcostata Koehne	324994	Taiwan - Path to Kanko	1968
Lasianthus chinensis Benth.	324995	Taiwan - Near Kanko	1968

Plant	P.I. number	Source	Collected
L. japonicus Miq.	235510	Japan - Shikoku	1956
L. plagiophyllus Hance	324997	Taiwan - Near Kanko	1968
L. satsumensis Matsum.	235511-512	Japan - Shikoku	1956
Ledum palustre var. *diversipilosum* Nakai	286564	Japan - Tohoku Forest Expt. Sta., Takisawa	1963
Leptospermum luehmannii F. M. Baill.	255006	Australia - Blake Garden, Brisbane	1959
L. pubescens Lam.	255971	Tasmania - Tasmanian Regional Lab., Hobart	1959
L. scoparium Forst.	255972	---do---	1959
Ligustrum liukiuense Koidz.	226765	Okinawa - Hentanayama, Kunigani-son	1955
L. microcarpum Kanehira & Sasaki	324998	Taiwan - Tsu-shan	1968
L. nepalense Roxb.	285372	Nepal - Near Posdi above Mardi Khola	1962
L. obtusifolium Sieb. & Zucc.	235136	Japan - Yatsugatake Mts., Nagano Pref.	1956
L. ovalifolium Hassk. 'Argenteum'	265262	Germany - H. A. Hesse, Baumschulen, Weener	1960
L. sempervirens (Franch.) Lingels	241304	France - Jardin Botanique, "Les Cedres", Alpes-Maritimes	1957
L. tschonoskii Decne.	286565	Japan - Mt. Hayachine, Iwate Pref.	1963
L. vulgare L.	318631	Germany - W. Kordes & Son, Holstein	1967
Lilium nepalense D. Don	285373	Nepal - Near Chaman	1962
Do.	287186	Nepal - Kathmandu Valley	1963
Lilium philippinense var. *formosanum* (Baker) Wils. ex Grove	325000	Taiwan - Mt. Morrison	1968
Lindera erythrocarpa Makino	317240	Korea - Mt. Halla, Cheju Island	1966
L. membranacea Maxim.	296021	Japan - Fukaura, Northern Honshu	1964
L. obtusiloba Blume	317241	Korea - Trail to Pack Tam Sa. Mt. Sorak	1966
Liriope graminifolia (L.) Baker	318567	Korea - Mt. Baek Yang, Cholla Namdo	1966
L. spicata Lour.	285374	Nepal - Mt. Furkai	1962
Do.	285375	Nepal - Dhaman	1962
Do.	318568	Korea - Near grave of Korean King, Suwon	1966
Lithocarpus glabra (Thunb.) Rehd.	229885	Japan - Saikyo Univ., Saikyo, Kyoto	1955
Lobelia gibberoa Hemsl.	290850	Ethiopia - Wallega Province	1963
Labelia sp.	285376	Nepal - Godavari	1962
Lonicera insularis Nakai	316409	Korea - To Dong, Ullungdo	1966
Lonicera sp.	314263-264	USSR - Botanical Garden, Tashkent, Uzbekistan	1966
Lonicera subsessilis Rehd.	317243	Korea - Mt. Sorak	1966

Plant	P.I. number	Source	Collected
Lyonia ligustrina (L.) DC.	231140	England - Royal Hort. Soc. Gardens, Surrey	1956
L. ovalifolia (Wall.) Drude	325002	Taiwan - Mt. Tatung, Taipeh	1968
Do.	325003	Taiwan - Tsu-shan	1968
Lysimachia vulgaris var. *davurica* (Ledeb.) R. Knuth	317244	Korea - Paek Tam Sa, Mt. Sorak	1966
Maackia fauriei (Levl.) Takeda	317245	Korea - Mt. Halla, Cheju Island	1966
M. tenuifolia (Hemsl.) Hand.-Mazz.	104872	China - Sun Yat-Sen's Memorial Park, Nanking	1934
Maesa sp.	237465	Burma - Chin Hills	1957
Magnolia campbellii Hook. f. & Thoms.	243867	England - Caerhays Castle Garden, Cornwall	1957
Do.	285381	Nepal - Mardi Khola	1962
M. campbellii 'Alba'	243866	England - Caerhays Castle Garden, Cornwall	1957
M. globosa Hook. f. & Thoms.	243869-870	England - G. H. Johnston garden, Cornwall	1957
Do.	243876	---do---	1957
M. sargentiana Rehd. & Wils.	243875	---do---	1957
M. sieboldii K. Koch	316971	Korea - Mt. Sorak	1966
Do.	316972	Korea - Paek Tam Sa, Mt. Sorak	1966
M. sprengeri Pampan. 'Diva'	298952	California - W. B. Clarke & Co., San Jose	1964
M. wilsonii (Finet & Gang.) Rehd.	256256	England - Hillier & Sons, Winchester	1959
Mahonia japonica Thunb. (DC.)	249423	Japan - Kojuen Nsy., Angyo	1958
M. lomariifolia Takeda	239376	France - Serre de la Madone, Alpes-Maritime	1957
Malus baccata (L.) Borkh.	316650	Korea - Kwang Nung, Kyunggido	1966
Do.	317367	Korea - Mt. Kwan Ak, An Yang	1966
Do.	323626-627	USSR - Arboretum, Timiraysev Academy, Moscow	1967
M. formosana (Kaw. & Koidz.) Kaw.	325004	Taiwan - Dunkan	1968
M. prunifolia (Willd.) Borkh. 'Golden Ge'	307500	Germany - Botanischer Garten, Dortmund	1965
M. prunifolia 'Kitaika Saninskaya'	323628	USSR - through Dept. Sci. & Ind. Res., Auckland, N.Z.	1967
M. pumila Mill.	323617	Afghanistan - Pamir Mountains	1967
Do.	323629	USSR - Kazakstan	1967
M. x *purpurea* (Barbier) Rehd. 'Hedwigiae'	307501	Germany - Botanisher Garten, Dortmund	1965
M. sieboldii (Regel) Rehd.	316711	Korea - Paek Tam Sa, Mt. Sorak	1966
Malus sp.	317246	Korea - Mt. Halla, Cheju Island	1966
Malus sp. 'Cheal's Golden Gem'	286787	England - East Malling Expt. Station	1963

Plant	P.I. number	Source	Collected
Malus sp. 'Edith'	307503	Germany - Botanischer Garten, Dortmund	1965
Malus sp. 'Frettingham Victoria'	307689	Netherlands - Labor. voor Plant. Arb., Wageningen	1965
Malus sp. 'Mill End'	307506	Germany - Botanischer Garten, Dortmund	1965
Malus sp. 'Prof. Sprenger'	307690	Netherlands. Labor. voor Plant. Arb., Wageningen	1965
Melaleuca graminea S. Moore	255099	Australia - Albany	1959
M. squarrosa J. E. Smith	255014	Australia - Victoria	1959
Melothria sp.	325005	Taiwan - Between Quai-san and Kanko	1968
**Metasequoia glyptostroboides* Hu & Chang 'National'	286608	Wash. D.C. - Selected at National Arboretum	1963
Molinia caerulea (L.) Moench 'Variegata'	244022	England - Cross Green Nsy., Liverpool	1957
Morinda umbellata L.	237889	Japan - Yakushima	1957
Myrica cerifera L.	226044	Nicaragua - Ministry of Agr., Managua	1955
Myrsine semiserrata Wall.	285468	Nepal - Above Mardi Khola	1962
Myrtus communis L.	249832	Crete - Asomatos	1958
Narcissus asturiensis (Jord.) Pugsl.	238523	Spain - Prov. Santander	1957
Do.	238669	Portugal - Near Braganca	1957
Do.	238700	Portugal - Serra da Estrela	1957
Narcisus bulbodocium L.	238777	Portugal - Oporto	1957
Do.	238877	Portugal - Coimbra	1957
Do.	239061	Spain - Seville, Prov. Huelva	1957
Do.	238524	Spain - Riano, Prov. Leon	1957
Narcisus bulbodocium var. *citrinus* Baker	238029	Spain - Pesajes de San Juan, Prov. Guipuzcoa	1957
N. bulbodocium 'Zaianicus'	238087	Morocco - Institut Scientifique, Rabat	1957
N. calcicola Mendonca	238778	Portugal - Coimbra	1957
N. cyclamineus Baker	238701	Portugal - Fareira River near Valonga	1957
N. elegans var. *oxypetalus* (Boisse.) Maire	238088	Morocco - Institut Scientifique, Rabat	1957
N. jonquilla L.	238506,702	Portugal - Rio Douro at Barca d'Alva	1957
Do.	239063	Portugal - Rio Guardiana near Serpa	1957
N. jonquilla 'Plena'	238737	Portugal - M. R. Tait garden, Porto	1957
N. poeticus var. *recurvus* (Haw.) Fernd.	239333	France - Near St. Cannat, Aix-en-Provence	1957
Do.	239358	France - Levans, Alpes Maritime	1957
N. jonquilla var. *verbanensis Herb.*	239682	Italy - Lake Maggiore near Pallanza	1957

Plant	P.I. number	Source	Collected
Narcissus pseudo-narcissus L.	238738-739	Portugal - Serra d'Arga, Minho	1957
N. psuedo-narcissus 'Early Maximus'	238703	Portugal - Porto	1957
Do.	242797	---do---	1957
N. pseudo-narcissus var. *johnstonii* Pug. 'Queen of Spain'	238736	Portugal - Quinta do Maio Garden, Porto	1957
N. pseudo-narcissus subsp. *nobilis* (Schult. f.) Fernd.	238525	Spain - Near Riano, Prov. Leon	1957
N. rupicola Dufour.	238507	Portugal - Near Amedo, Prov. Tres des Mondes	1957
Do.	238704	Portugal - Near Rio Douro	1957
N. scaberulus Henriq.	238705	Portugal - Near Coimbra	1957
N. serotinus L.	238089	Morocco - Institut Scientifique, Rabat	1957
Do.	243837	Sicily - Botanical Garden, Palermo	1957
N. sp.	140087	Iran - Damavar, Bakhtiari	1941
N. tazetta L.	238740	Portugal - Coimbra near Santerem	1957
N. tazetta 'Aureus'	240992	Italy - Botanical Garden, Pisa	1957
N. tazetta 'Barlae'	240926	---do---	1957
N. tazetta 'Chrysanthus'	240927	---do---	1957
N. tazetta var. *italicus* (Sims) Baker	240308,993	---do---	1957
N. tazetta subsp. *papyraceus* (Ker) Baker	238090,099	Morocco - Institut Scientifique, Rabat	1957
Do.	240994	Italy - Botanical Garden, Pisa	1957
N. triandrus L.	238706	Portugal - Serra de Marao	1957
Do.	238707	Portugal - Near the Rio Douro	1957
Do.	238708	Portugal - Near Covilha	1957
N. triandrus var. *albus* (Salisb.) Baker	238527	Spain - Robeldal, Prov. Madrid	1957
N. triandrus var. *cernuus* Baker	239082	---do---	1957
N. triandrus var. *concolor* (Haw.) Baker	238879	Portugal - On Coimbra-Penacova road	1957
Nematanthus longipes DC.	247252	Brazil - Alta Da Serra Paranapiacaba, Sao Paulo	1958
Neolitsea sp.	235431	Japan - Shikoku	1957
Nicolaia elatior (Jack) Horan.	246473	Brazil - Botanical Garden, Rio de Janeiro	1958
Nolina durangensis Trel.	262388	Mexico - SE of Parral, Chihuahua	1959
N. recurvata (Lem.) Hemsl.	249498	Brazil - Botanical Gard., Rio de Janeiro	1958
Nothoscordum bivalve (L.) Britt.	203311	Uruguay - A. A. Beetle, Canelones	1952
Olearia megalophylla F. Muell.	258520	Australia - Commonwealth Sci. & Ind. Organ. Canberra	1959

Plant	P.I. number	Source	Collected
Olearia teretifolia (Sond.) F. Muell.	260808	Australia - Bendigo, Victoria	1959
Oroxyon indicum (L.) Vent.	287188	Nepal - G. A. C. Herklots, Kathmandu	1963
Osbeckia crinita Benth.	307301	India - Lloyd's Bot. Garden, Darjeeling	1965
Osmanthus delavayi Baill.	242288	Scotland - Royal Bot. Garden, Edinburgh	1957
O. x *fortunei* Carr.	238030	France - R. Chenault Nsy., Orleans	1957
Do.	242236	Scotland - Royal Bot. Garden, Edinburgh	1957
Osmanthus fragrans Lour.	236240	Japan - Nakada Nsy., Angyo-Oowaza, Saitama-ken	1957
O. fragrans 'Aurantiacus'	242235	Scotland - Royal Bot. Garden, Edinburgh	1957
Osmanthus heterophyllus (G. Don) P.S. Green	205644	Maryland - Selected at USPIS, Glenn Dale	1953
O. heterophyllus 'Aureus'	242290	Scotland - Royal Bot. Garden, Edinburgh	1957
**O. heterophyllus* 'Gulftide'	203308	Maryland - selected at USPIS, Glenn Dale	1954
O. heterophyllus 'Ogon Hiragi'	235241	Japan - Nakada Nsy., Angyo-Oowasa, Saitama-ken	1957
O. heterophyllus 'Purpureus'	242291	Scotland - Royal Bot. Garden, Edinburgh	1957
O. heterophyllus 'Rotundifolus'	242238	---do---	1957
O. heterophyllus 'Variegatus'	231949	Japan - Hort. Div. Kyushu Exp. Sta., Kurume	1956
Do.	235973	---do---	1956
Do.	242292	Scotland - Royal Bot. Garden, Edinburgh	1957
O. suavis C. B. Clarke	242240	---do---	1957
Osmarea x *burkwoodii* Burkw. & Skipw.	242241	---do---	1957
Oxytenanthera abyssinica (A. Rich.) Munro	279656	Ethiopia - Bureau of Reclamation, Addis Ababa	1962
Oxytropis sp.	249835	Greece - Northern base of Mt. Olympus	1958
Pandorea australis (R. Br.) Spach	236451	Australia - Commonwealth Sci. & Ind. Res. Org. Canberra	1957
Passiflora x *allardii* Chitt.	243894	England - John Innes Hort. Inst., Hertfordshire	1957
P. sidaefolia M. Roemer	249501	Brazil - Botanical Garden, Rio de Janeiro	1957
P. suberosa L.	243896	England - John Innes Hort. Inst., Hertfordshire	1957
Paulownia fortunei (Seem.) Hemsl.	248159	Formosa - B. O. Mulligan, Wash. Arb., Seattle	1958
Pelargonium zonale (L.) L'Her.	241396	France - Villa Roquebrune Garden, Cap Martin	1957
Penstemon sp.	262391	Mexico - SW of Villa Matamoros, Chihauhau	1959
Pentapterygium (hybrid) 'Ludgvan'	242359	Scotland - Royal Bot. Garden, Edinburgh	1957
P. serpens (Wight) Klotzsch	307303	India - Mt. Tonglu, West Bengal	1965
Peperomia obstusifolia A. Dietr. 'Clusiifolia'	241469	Spain - Gerona	1957
Petteria ramentacea (Sieber) Presl	79039	England - Royal Bot. Gard., Kew, Surrey	1929
Phellodendron amurense Rupr.	262714	USSR - Premier Khrushchev	1960

Plant	P.I. number	Source	Collected
Philadelphus x *lemoinei* Lemoine	78098	France - E. Turbat & Co., Orleans	1928
Do.	233562	Massachusetts - Arnold Arb., Jamaica Plain	1949
P. schrenkii Rupr.	317252	Korea - Mt. Sorak	1966
Philodendron sp.	237647	Costa Rica - near Finca Las Concavas, Cartago	1957
Phlomis herba-venti L.	242040	Spain - North of Granada, road to Sierra Nevada Mts.	1957
Photinia beauverdiana var. *notabilis* (C. Schneid.) Rehd. & Wils.	102256	England - Dorset - Keeper's Hill Nsy.	1933
P. glabra (Thunb.) Maxim.	231950	Japan - Kyushu Agr. Expt. Sta., Kurume Fukuoka	1956
P. integrifolia Lindl.	307304	India - Lloyd's Bot. Garden, Darjeeling	1965
Photinia sp.	325008	Taiwan - Between Quai-san and Kanko	1967
Do.	325009	Taiwan - Road to Mt. Hohuan	1967
P. villosa f. *maximowicziana* (Levl.) Rehd.	143804	North Carolina - SCS, Chapel Hill	1942
Phyllanthus parvifolius Buch-Ham. ex D. Don	285391	Nepal - Pokhara	1962
Phyllanthus sp.	237473	Burma - Elev. 3000-4000 feet	1957
Picea glehnii (Schmidt) Masters	230966	Japan - Hokkaido Expt. Forest, Sorachi-gun	1956
P. jezoensis (Sieb. & Zucc.) Carr.	227682	Japan - Kushiro, Teshikaga Forestry Sta.	1955
P. koyamai Shiras.	317368	Korea - College of Agr., Suwon	1966
Pieris formosa (Wall.) D. Don	285392	Nepal - Rajpath near Dhaman	1962
Do.	307305	India - Mt. Tonglu, West Bengal	1965
P. japonica (Thunb.) G. Don	228034	Japan - Okaya-shi, Korakuen Garden	1955
Do.	276560	Japan - Near Raira, Ibaraki Pref.	1961
Do.	277419	Japan - Hort. Section. Min. of Agr., Tokyo	1961
P. taiwanensis Hayata	325011-013	Taiwan - Collected in the wild	1967
Pilea nummulariafolia Wedd.	240824	Italy - Stazione Sperimentale di Flori., San Remo	1957
Pinus densiflora Sieb. & Zucc.	317254	Korea - Mt. Halla, Cheju Island	1966
Do.	319315	Korea - Mt. Sokni, Chungchong Pukto	1966
P. griffithii McClelland	231755	Pakistan - Gordon College, Rawalpindi	1956
Do.	256257	England - Hillier & Sons, Winchester	1959
**P. halepensis* Mill.	271431	Afghanistan - Lashkar Gah Nursery	1961
P. halepensis var. *pityusa* (Stev.) Gordon	296110	USSR - Pitsunda, NW of Sukhumi, Georgia	1965
P. heldreichii var. *leucodermis* (Ant.) Markgraf ex Fitschen	246670	Greece - Forest Res. Inst., Athens	1958

Plant	P.I. number	Source	Collected
Pinus koraiensis Sieb. & Zucc.	230967	Japan - Hokkaido Expt. Forest	1956
Do.	316977	Korea - Pong Jeung Am, Mt. Sorak	1966
Do.	317255-256	Korea - Collected in wild	1966
Do.	317370	Korea - Kwang Nung, Kyunggio	1966
P. nigra var. *pallasiana* (Lambert) C. Schneid.	293809	USSR - Above Yalta	1963
P. parviflora Sieb. & Zucc.	317257	Korea - Seoul Natl. Univ., Suwon	1966
P. patula Schlecht. & Cham.	239553	California - Plumas County	1957
P. pumila Regel	254356	Japan - Texhikaga, Kushiro District	1960
P. pinea L.	233825	Italy - Pine forest near Pisa	1956
P. sp.	234648	Spain - Sierra de Alcubierre, Aragon Prov.	1956
P. stankewiczii (Suk.) Fom.	293810	USSR - Nikita Botanic Garden, Yalta	1963
P. sylvestris L.	247869	Greece - Agr. Attache, U.S. Embassy, Athens	1958
Do.	262715	USSR - Premier Khrushchev	1960
P. thunbergii Parl.	317258	Korea - Mt. Halla, Cheju Island	1966
Piper methysticum Forst.	239688	Indonesia - Balai Penjelidikan Tehnik, Pertanian	1957
Pittosporum tobira (Willd.) Ait.	275058	Japan - Izura, Kita-Ibaraki City, Ibaraki Pref.	1961
Do.	275399	Japan - Kiyosaki, Ayukawa, Miyagi Pref.	1961
Do.	317259	Korea - Theju Tourist Hotel Garden	1966
P. undulatum Vent.	249505	Brazil - Botanical Garden, Rio de Janeiro	1958
Plathymenia reticulata Benth.	249506	---do---	1958
Plectranthus ciliatus E. Mey.	239685	Italy - Villa Taranto, Lake Maggiore, Palanza	1957
Podocarpus gracilior Pilg.	241377	Ethiopia - U.S. Operations Mission, Addis Ababa	1957
P. nagi (Thunb.) Pilg.	235432	Japan - Murotozaki, Kochi-ken, Shikoku	1956
Polygonum capitatum (Buch.-Ham.)	307307	India - Lloyd's Botanic Garden, Darjeeling	1965
P. reynoutria Makino	226541	Japan - Mount Sakurajima	1955
Potentilla fruticosa L. 'Farreri'	259159	Netherlands - G. Veerman Nsy., Boskoop	1959
P. fruticosa 'Farreri Grandiflorum'	259146	---do---	1959
P. fruticosa 'Grandiflora'	259160	---do---	1959
P. fruticosa 'Maanelys'	259150	---do---	1959
P. fruticosa 'Mount Everest'	259151	---do---	1959
P. fruticosa 'Snowflake'	259154	---do---	1959
P. fruitcosa var. *parvifolia* (Fisch. ex Schlecht.) Wolf	259152	---do---	1959

Plant	P.I. number	Source	Collected
P. fruitcosa var. *purdomii* Rehd.	259153	Netherlands - G. Veerman Nsy., Boskoop	1959
P. fruitcosa var. *rigida* (Wall. ex Lehm.) Wolf	259158	---do---	1959
P. fulgens Wall. ex Hook.	307312	India - Near Senchal, West Bengal	1965
P. recta L.	314474	USSR - Tbilisi Botanical Inst., Georgia	1966
Prunus cerasoides D. Don	289939	Nepal - G. A. C. Herklot, Kathmandu	1963
Do.	307323	India - Between Rimbick & Palmajua, W. Bengal	1965
P. ilicifolia (Nutt.) Walp. 'Jacumba'	260615	California - Collected by H. S. Gentry	1959
P. maackii Rupr.	262716	USSR - Presented by Russian Commission	1960
P. padus L.	316620	Korea - Park Tal Mt., Kangwando	1966
P. spinulosa Sieb. & Zucc.	227923	Japan - Kyuosumi-yama, Province Awa, Chiba	1955
Psidium sp.	238935	Morocco - Ministere de l'Agr., Rabat	1957
Psychotria serpens L.	237890	Japan - Yakushima, Isso River	1957
Psychotria sp.	237891	Japan - Yakushima, Miyanoura River, Manno Nat'l. Forest	1957
Do.	237892	Japan - Yakushima, Onaida	1957
P. undata Jacq.	229904	Florida - USPIS, Miami	1955
**Pyracantha crenulata* (D. Don) Roem.	285401	Nepal - Between Damdam and Bega	1962
Do.	293848	USSR - Above Yalta	1963
P. coccinea Roem.	203240	Turkey - Lake Aband, Bolu	1952
Pyrus calleryana var. *fauriei* (C. Schneid.) Rehd.	317371	Korea - Suwon	1966
Quercus (hybrid)	316981	Korea - Mt. Sorak, Kangwon Prov.	1966
Q. acutissima Carruthers	317372	Korea - Seoul Natl. Univ., Suwon	1966
Q. aliena Blume	317373-374	---do---	1966
Q. gilva Blume	229886	Japan - Kyoto, Saikyo Univ.	1955
Q. glandulifera Blume	316978	Korea - Mt. Sorak	1966
Do.	317375-376	Korea - Seoul Natl. Univ., Suwon	1966
Q. glauca Thunb.	229887	Japan - Saikyo Univ., Kyoto	1955
Q. mongolica Fisch. ex Turcz.	316979	Korea - Mt. Sorak, Kangwon Prov.	1966
Q. phillyraeoides A. Gray	229889	Japan - Saikyo Univ., Kyoto	1955
Do.	261217	England - Royal Botanic Gardens, Surrey	1959
Q. sessilifolia Blume	229888	Japan - Saikyo Univ., Kyoto	1955
Quillaja brasiliensis (St. Hil. & Tul.) Mart.	242042	Portugal - Botanical Garden, Univ. of Lisbon	1957

Plant	P.I. number	Source	Collected
Rapanea neriifolia (Sieb. & Zucc.) Mez 'Taimintachibana'	227998	Japan - Igahi, Ehime Pref., Shikoku	1955
Raphiolepis sp.	237897	Japan - Yakushima, Koseda	1957
R. umbellata (Thunb.) Makino	235434	Japan - Murto-zaki, Kochi-ken, Shikoku	1956
Do.	277653	Japan - Ibaraki Univ., Ibaraki Pref., Mito	1961
R. umbellata 'Mertensii'	277664	---do---	1961
Rhamnus alaternus L.	241910	Portugal - Coimbra	1957
R. crocea subsp. *illicifolia* (Kellogg) C. B. Wolfe	242262	Mexico - Baja California	1957
R. schneideri Levl. & Vaniot	317268	Korea - Trail to Paek Tam Sa, Mt. Sorak	1966
Rhododendron (hybrid)	199299-300	Taiwan - Taipeh	1952
Do.	199302-303	---do---	1952
Do.	274873	Japan - Mt. Ashitake, Shizouka Pref., Honshu	1961
R. (hybrid) 'Ben Morrison'	337618	Maryland - Selected at USPIS, Glenn Dale	1968
R. (hybrid) 'Mrs. LBJ'	337619	---do---	1968
Rhododendron (hybrids) 29 varieties	274706-721 274723-735	Japan - Private garden, Hirado Island, Kyushu	1961
R. ambiguum Hemsl.	229401	England - Royal Hort. Society, Wisley	1954
R. anthopogon Don.	307327	India - Darjeeling, West Bengal	1965
Do.	311317	India - Lloyd's Botanic Garden, Darjeeling	1965
R. arboreum J. E. Smith	237484	Burma - Mt. Victoria	1957
Do.	285406	Nepal - Mt. Furkai	1962
Do.	307328	India - Mt. Tonglu	1965
Do.	307329	India - Lloyd's Botanic Garden, Darjeeling	1965
R. barbatum Wall. ex Don	285409	Nepal - Mt. Furkai	1962
Do.	307331	India - Mt. Tonglu, West Bengal	1965
R. brachycarpum D. Don ex G. Don	315034	Japan - Mt. Shirane, Gumme Pref.	1966
R. brachycarpum var. *rosaeflorum* Miyoshi	316982-983	Korea - Mt. Sorak	1966
R. caeruleum Levl.	229402	England - Royal Hort. Soc., Wisley	1954
R. campanulatum D. Don	307332	India - Sandakphu, West Bengal	1965
R. charitopes Balf. & Farrer	229404	England - Royal Hort. Soc., Wisley	1954
R. charitostreptum Balf. & Ward	229405	---do---	1954

Plant	P.I. number	Source	Collected
Rhododendron degronianum Carr.	315036	Japan - Mt. Shirane, Gumma Pref.	1966
R. degronianum f. *spontaneum* Nakai	277665	Japan - Biological Inst., Ibaraki Univ., Mito	1961
R. edgeworthii Hook. f.	307337	India - Darjeeling, West Bengal	1965
R. ellipticum Maxim	325023-024	Taiwan - Between Lishan and Hohuan	1968
R. falconeri Hook f.	307338	India - Road to Sandakphu	1965
Do.	307339	India - Mt. Tonglu	1965
R. farrerae Tate in Sweet	276257	Hong Kong - Victoria Peak	1961
R. formosanum Hemsl.	325025	Taiwan - Mt. Alishan	1968
R. fortunei Lindl.	158035	China - Lu-Shan Botanical Garden, Kiu Kiang	1947
R. glaucophyllum Rehd.	229406	England - Royal Hort. Soc., Wisley	1954
R. grande Wight	307340	India - Road to Sandakphu	1965
Do.	307341	India - Mt. Tonglu	1965
R. hippophaeoides Balf. & Smith	229407	England - Royal Hort. Soc., Wisley	1954
R. indicum (L.) Sweet	235758	Japan - Manno Natl. Forest, Yakushima	1956
R. japonicum (Gray) Suringar	232011	Japan - Bot. Garden of Osaka, Kitakawachi	1956
Do.	235138-139	Japan - Above Shibuyu Onsen, Nagano Pref.	1956
Do.	277729,732	Japan - Kyushu Agr. Expt. Station	1961
Do.	277735	---do---	1961
Do.	278156	Japan - Tanichi Natl. Forest, Aomori Ken	1961
Do.	315037	Japan - Above Kusatsu	1966
R. japonicum 'Flavum'	277728	Japan - Kyushu Agr. Expt. Station	1961
R. kanehirai Wils.	326026	Taiwan - Kanko, Taipei County	1968
R. kawakamii Hayata	325027	Taiwan - Mt. Alishan	1968
R. kiusianum Makino	226141-142	Japan - Mt. Kirishima	1955
Do.	226542	---do---	1955
Do.	235976,981	Japan - Kyushu Agr. Expt. Station	1956
Do.	315039	Japan - Mt. Kirishima	1966
Do.	330366	Japan - Mt. Tsurumi, Oita Pref.	1968
R. lepidotum Wall. ex Don	307344-345	India - Near Sandakphy, West Bengal	1965
R. lindleyi T. Moore	307346	India - Rimbick Forest Station, West Bengal	1965
R. metternichii Sieb. & Zucc.	330367	Japan- Shakutake Mt., between Oita and Rukuoka Prefectures	1968
Do.	330368	Japan - Mt. Ichibus area, Kumamoto Pref.	1968
R. molle (Blume) Don	159034	China - Lu-Shan Bot. Garden, Kiukiang	1947

Plant	P.I. number	Source	Collected
Rhododendron morii Hayata	325029-031	Taiwan - Collected in wild	1968
Do.	325033-034	---do---	1968
R. mucronulatum Turcz.	317269	Korea - Mt. Halla, Cheju Island	1966
Do.	317378	Korea - Mt. Kwan Ak, An Yang	1966
Do.	317379	Korea - Tschang Bok Lee Garden, Suwon	1966
R. mucronulatum 'Cornell Pink'	240654	Washington, D.C. - National Arboretum	1957
R. mucronulatum var. *ciliatum* Nakai	317270	Korea - Mt. Sorak	1966
Do.	317271	Korea - Mt. Halla, Cheju Island	1966
R. nakaharai Hayata	325035	Taiwan - Mt. Tatung	1968
R. nipponidum Matsum.	229408	England - Royal Hort. Soc., Wisley	1954
R. obtusum var. *kaempferi* (Planch.) Wils.	274875	Japan - Mikata Gahara, Shizuoka, Honshu	1961
Do.	275032,034	Japan - Collected in wild	1961
Do.	275060-061	---do---	1961
Do.	275402-403	---do---	1961
Do.	275533-535	---do---	1961
Do.	275812	---do---	1961
Do.	276093	---do---	1961
Do.	276095-096	---do---	1961
Do.	276141,289	---do---	1961
R. obtusum var. *kaempferi* 'Yama-tsutsuji'	274542-543	---do---	1961
R. oldhamii Maxim.	326036-039	Taiwan - Collected in wild	1968
R. pseudochrysanthum Hayata	325050-055	---do---	1968
R. pulchrum var. *calycinum* (Lindl.) Rehd. 'Akebono'	276290	Japan - Kyushu Agr. Expt. Station, Kyushu	1961
R. pulchrum var. *calycinum* 'Shirotae'	276291	---do---	1961
R. racemosum Franch.	229412	England - Royal Hort. Soc., Wisley	1954
R. roylei Hook f.	307348	India - Near Kalipokhri, West Bengal	1965
R. rubropilosum Hayata	325042-046	Taiwan - Collected in wild	1968
Do.	325048-049	---do---	1968
Do.	325582	---do---	1968
R. russatum Balf. f. & Forr.	229410	England - Royal Hort. Soc., Wisley	1954

Plant	P.I. number	Source	Collected
Rhododendron sataense Nakai	279007	Japan - Natl. Hort. Expt. Sta., Hiratsuka Kanagawaken	1962
Do.	274541	Japan - Mt. Takakuma, Osumi, Kyushu	1961
R. schlippenbachii Maxim.	316984	Korea - Taek Wal Yong	1966
Do.	317380	Korea - Mt. Kwan Ak, An Yang	1966
R. serphyllifolium (A. Gray) Miquel 'Unzen-Tsutsuji'	274546	Japan - Sarugajo, Osumi Peninsula, Kyushu	1961
R. simsii Planch.	276258-259	Hong Kong - Hong Kong Botanic Garden	1961
Rhododendron sp.	277686	Japan - Natl. Agr. Res. Inst., Kanagawaken	1961
Do.	277688-689	---do---	1961
Do.	277692	---do---	1961
Do.	277695-696	---do---	1961
Do.	285411	Nepal - Near Dhaman	1962
Do.	307353	India - Lloyd's Botanic Garden, Darjeeling	1965
Do.	311320	---do---	1965
R. sp. 'Kagetsu-muji'	226147	Japan - Hort. Field Stat., Kurume, Kyushu	1955
R. sp. 'Kikoshi'	228108	Japan - Toshigi Ken Satuki Kai, Utsunomiya	1955
R. tashiroi Maxim. 'Yama-zakura Tsutsutsi'	226714	Okinawa	1955
R. tschonoskii Maxim.	228004	Japan - Mt. Ishidzuchi	1955
R. weyrichii Maxim.	228038	Japan - Foot of Mt. Ishidzuchi	1955
Do.	274839	Japan - Kishima-zaki, Nagasaki-ken, Kyushu	1961
Do.	317273	Korea - Mt. Hall, Cheju Island	1966
R. yedoense var. *poukhanense* Nakai	317272	---do---	1966
R. yunnanense Franch.	229415	England - Royal Hort. Soc., Wisley	1954
Salix alba L. 'Chermesina'	268122	Netherlands - Pierre Lombarts, Zunder	1960
S. alba 'Drankenburg'	268123	---do---	1960
S. alba 'Liempde'	266453	Netherlands - Old Farm Nsy., Boskoop	1960
S. alba 'Metmondiana'	268125	Netherlands - Pierre Lombarts, Zunder	1960
S. babylonica L.	246897	Brazil - Vivero Manequinho Lopes, Sao Paulo	1958
S. cinerea L.	268127	Netherlands - Pierre Lombarts, Zunder	1960
S. dasyclados Wimmer	268130	---do---	1960
S. gracilistyla var. *melanostachys* (Makino) C. K. Schn.	266509	Netherlands - W. Hoogendorn & Sons, Boskoop	1960

Plant	P.I. number	Source	Collected
Salix interior Rowlee	268131	Netherlands - Pierre Lombarts, Zunder	1960
S. koreensis Anderss. in DC.	318580	Korea - Forest Expt. Sta., Seoul	1967
S. purpurea var. *amplexicaulis* (Bory & Chaub.) Boiss.	266477	Netherlands - J. G. van Bijk & Sons, Kwekery Eemnes	1960
S. sachalinensis Schmidt 'Sekka'	266510	Netherlands - W. Hoogendoorn & Sons, Boskoop	1960
S. x *wimmeriana* Grenier & Godron	266511	---do---	1960
Salmea scandens (L.) DC.	240077	Sicily - Botanical Garden, Palermo	1957
Sambucus buergeriana Blume	227490	Japan - Akan, Kushiro Prov., Hokkaido	1955
S. williamsii Hance	316631	Korea - Seoul Natl. Univ., Suwon	1966
Sarcandra glabra (Thunb.) Nakai	237900	Japan - Yakushima, Miyanoura	1957
Do.	237901	Japan - Tanegashima, Onigasawa Natl. Forest	1957
Sarcococca confusa Sealy	242895	England - Botanical Garden, Kew	1957
S. hookeriana var. *digyna* Franch.	237833	France - Vilmorin-Andrieux, Seine-et-Oise	1957
S. ruscifolia Stapf	239378	France - above Menton, Alpes-Maritimes	1957
S. ruscifolia var. *chinensis* (Franch.) Rehd. & Wils.	242896	England - Botanical Garden, Kew	1957
S. saligna (D. Don) Muell.-Arg.	239335	France - L. Johnston Garden, Serre de la Madone	1957
Schinopsis lorentzii (Griseb.) Engl.	227720	Argentina - Div. de Exp. y Intro. de Plantas, Buenos Aires	1955
Schisandra chinensis (Turcz.) Baill.	316606	Korea - Sim Won, Mt. Chiri, Cholla Namdo	1966
Do.	316712	Korea - Ko Chun, on Mt. Tok-yu	1966
Sciadopitys verticillata (Thunb.) Sieb. & Zucc.	235515	Japan - Gegu Shrine, Ise City, Mie Pref.	1956
Scilla chinensis Benth.	318582	Korea - Yang Yang, Kangwando	1966
Selaginella marginata (Humb. & Bonpl.) Spring	247225	Brazil - Chacara Santa Rosa, Sao Paulo	1958
Senecio cineraria DC.	238934	Morocco - Min. de l'Agr., Rabat	1957
Serissa foetida (L. f.) Lam.	226298	Japan - Higure Nsy., Angyo	1955
Skimmia japonica Thunb.	237902	Japan - Yakushima, Kosugi-dani	1957
Smilax china L.	316985	Korea - South of Yang Yang, Kangwando	1966
Solanum seaforthianum Andrews	238911	Mexico - Tierra Blanca, Vera Cruz	1957
S. violaefolium Schott	248132	Brazil - Inst. Agronomico, Campinas	1958
Sorbus amurensis Koehne	317283	Korea - South of Yang Yang, Kangwando	1966
S. commixta Hedl.	237905	Japan - Hana-no-ego, Yakushima	1957

Plant	P.I. number	Source	Collected
Sorbus commixta Hedl. (con.)	317284	Korea - Forest Expt. Station, Seoul	1966
S. vilmorinii C. Schneid.	242920	England - Botanical Garden, Kew	1957
Spiraea fritschiana Schn.	317285-286	Korea - Trail to Paek Tam Sa. Mt. Sorak	1966
S. micrantha Hook.	285425	Nepal - Mt. Furkai	1966
Do.	307365	India - Lloyd's Botanic Garden, Darjeeling	1965
S. prunifolia f. *simpliciflora* Nakai	319327	Korea - Kangwando	1967
S. salicifolia L.	317288	Korea - Mun Jae Hill	1966
Do.	318585	Korea - Buddhist Temple, Mt. Odai, Kangwando	1967
Stachyurus lancifolius Koidz.	237907	Japan - Yakushima, Isso River	1957
S. praecox Sieb. & Zucc.	296026	Japan - Fukusura, Northern Honshu	1964
Strobilanthes lactatus Hook.	240766	Italy - Botanical Garden, Univ. of Genoa	1957
Styrax japonica Sieb. & Zucc.	316988	Korea - Near Sorak Dong, Kangwando	1966
S. kotoensis Hayata	226788	Okinawa - Mateira-gewa, Hentona District	1957
Symplocos lucida Sieb. & Zucc.	277730-731	Japan - Oomura, Kyushu	1961
S. paniculata (Thunb.) Miquel	316714	Korea - Mt. Sok Ni, Chunchong, Pukto	1966
S. theophrastaefolia Sieb. & Zucc.	237914	Japan - Miyanoura River, Yakushima	1957
Syringa amurensis Rupr.	316990	Korea - Mt. Sorak	1966
Do.	316991	Korea -Kangwando	1966
S. meyeri C. Schneid.	23032	China - Near Peking	1908
S. velutina Komarov	317293	Korea - Forest Expt. Sta., Seoul	1966
S. vulgaris L.	257661	Yugoslavia - Agr. Attache, U.S. Embassy, Belgrade	1959
Tacca macrantha W. Limpr.	260987	Belgium - Jardin Botanique de l'Etat, Meise	1959
Taiwania cryptomerioides Hayata	325071	Taiwan - Chi-to Forestry Station	1967
Tachiroea okinawensis Matsum.	226772	Okinawa - Hentona-Yama, Kunigami	1955
Taxus cuspidata Sieb. & Zucc.	319328	Korea - Cheju Island	1966
Tecoma sp.	266388	Peru - Near Tarma	1960
Teucrium betonicum L'Her.	238783	Portugal - Botanical Garden, Coimbra	1957
Thevetia peruviana (Pers.) Merr.	285462	Nepal - Kalo Gandaki River near Beni	1962
Thuja koraiensis Nakai	317296-297	Korea - Mt. Sorak, Kangwando	1966
Thujopsis dolabrata var. *hondai* Makino	275814	Japan - Mt. Oroisan, Aomore Pref.	1961
Tilia cordata Mill.	262717	USSR - Premier Khrushchev	1960
Trachelospermum asiaticum Nakai 'Hatuyuki Katura'	236250	Japan - Nakada Nsy., Angyo, Saitamaken	1957
T. asiaticum var. *oblanceolatum* Nakai	235331	Japan - Oshima Island, Wakayama Pref.	1956

Plant	P.I. number	Source	Collected
Tricyrtis formosana Baker	236019	Japan - Nakada Nsy., Angyo, Saitamaken	1956
Tritonia sp.	307371	India - Samanden, West Bengal	1965
Trochodendron aralioides Sieb. & Zucc.	237908	Japan - Above Kosugi-dani, Yakushima	1956
Tutcheria shinkoensis (Hayata) Nakai	325073	Taiwan - Lin-hua-chi	1968
T. spectabilis (Champ.) Dunn	230368	Hong Kong - Gardens Div., Urban Service Dept.	1955
T. virgata (Koidz.) Nakai	213368	Okinawa - T. Saito	1954
Do.	229881	Okinawa - Genka Hanaji-son	1955
Do.	231056	Okinawa - U.S. Civil Admin., Ryuku	1956
Ulmus laevis Pallas	260883	USSR - Krasnodarsk area of the Caucasus	1959
Do.	260884	USSR - Province Oblat of Orenburg Steppe Zone	1959
Do.	290779	USSR - All-Union Inst. Plt. Ind., Leningrad	1963
U. pumila var. *arborea* Litv.	260885	USSR - Tagenrog, Rostov Province	1959
Do.	297426-427	USSR - All-Union Inst. Plt. Ind., Leningrad	1964
Vaccinium axillare Nakai	227550	Japan - Mt. Kurodake, Ishikari	1955
V. bracteatum Thunb.	237910	Japan - Yakushima, Isso River	1957
V. ciliatum Thunb.	228041	Japan - Mt. Ishidzuchi	1955
V. delavaya Franch.	242255	Scotland - Royal Bot. Garden, Edinburgh	1967
V. hirtum Thunb.	227231	Japan - Kyoto	1955
V. smallii A. Gray	227578	Japan - Mt. Hokkoda, Aomori Pref.	1955
V. japonicum Miquel	317303	Korea - Mt. Halla, Cheju Island	1966
V. koreanum Nakai	316608	Korea - Mt. Chiri	1966
Do.	316621-622	Korea - Kangwando	1966
Do.	316717	Korea - Mt. Tok-Yu, Ko Chun	1966
V. meridionale Sw.	237108	Colombia - 10 km beyond Choconta	1957
Vaccinium sp.	228042	Japan - Foot of Mt. Ishidzuchi	1955
Do.	237911	Japan - Yakushima, between Kurio & Onoaide	1957
Virburnum awabukii C. Koch	226789	Okinawa - Mts. of Kunigami	1955
Do.	317305	Korea - Near Cheju City	1966
V. buddleifolium C. H. Wright	111380	China - Natl. Wu-Han Univ., Wu-chang, Hupeh	1935
V. coriaceum Blume	285477	Nepal - Near Dhaman	1962
V. dilatatum Thunb.	296028	Japan - Forest Expt. Sta., Meguro, Tokyo	1964
V. furcatum Blume ex Maxim.	228043	Japan - Mt. Ishidzuchi	1955
V. harryanum Rehd.	261219	England - Exbury House, Hants	1959
V. japonicum (Thunb.) Spreng.	235518	Japan - Kyoto Univ. Expt. Forest, Wakayama Pref.	1956

Plant	P.I. number	Source	Collected
Virburnum lantana L.	293865	USSR - Yedentsi Forest, Moldavia	1963
V. opulus L.	206488	Turkey - Bunyan	1953
V. sargentii Koehne	296029	Japan - Forest Expt. Sta., Neguro, Tokyo	1964
Viburnum sp.	285340	Nepal - Base of Ulleri	1962
Do.	285437	Nepal - Near Dhaman	1962
Villebrunea pedunculata Shirai	237912	Japan - Yakushima	1957
Vinca major L. 'Pubescens'	239252	France - L. Johnston Garden, Alpes-Maritimes	1957
Weigela hortensis (Sieb. & Zucc.) K. Koch	286570	Japan - Mt. Iwate, Iwate Pref.	1963
Zephyranthes rosea Lindl.	307376	India - Near Sirikhola, West Bengal	1965
Z. texana Herbert	236354	Africa - McGregor Museum	1957

Abies georgei

The Chinese Fir is a slow-growing, compact evergreen to 80 feet high. The leaves are dark green above, silvery beneath, and compactly arranged on densely hairy, reddish-brown branchlets. The ovoid cones to 3½ inches long with bracts exserted; reflexed bracts are deep violet while immature. Unlike most firs, this one changes color tones with the seasons.

This accession is fairly adaptable in Washington, Oregon, South Carolina, and Tennessee. It has been winterkilled in Iowa, New York, and parts of Massachusetts. It is generally intolerant to heat and showed heat injury in parts of Georgia and South Carolina.

Acer ginnala var. *semenovii*

This variety of maple is generally described as a small tree or a large bushy shrub with small leaves of 3 to 5 narrow lobes. The seed for this accession was collected from a finely branched, upright shrub with unordinarily small leaves.

Reports from Nebraska indicate that this accession exhibits appreciable tolerance to high lime soils. The plant thrives in New England, the Midwest, and Palmer, Alaska. However, the branch tips killed back at -30° F. in Vermont and the tops were killed at -35° in Washington.

Alnus

According to Willis (*9*), the genus *Alnus* is comprised of 35 species that range throughout the Northern Hemisphere as far south as Assam and Indochina and along the Andes in the Southern Hemisphere. The alders are very closely related to the birches. They are deciduous trees and shrubs of little ornamental value except for their ability to grow in wet situations unsuited to most trees and shrubs. *A. cordata*, *A. glutinosa*, and *A. rhombifolia* are listed by both Plants & Gardens (*4*) and Plant Buyer's Guide (*6*) as being available from commercial sources. The latter reference also lists sources for nine other species and three varieties of alder.

Of the alders reported on here, seed sources only are listed by Plant Buyer's Guide (*6*) for the species *A. hirsuta* and *A. japonica*. No commercial listing was found for the other species or varieties.

Alnus formosana

This alder, native to Taiwan, is a small tree with bright green ellipsoid leaves. Its typically alder fruit is ½ inch in diameter and dark green. It is a very fast growing attractive tree of pyramidal habit.

The metropolitan area of Washington, D.C., appears to be the northern limit of hardiness for this alder. Reports indicate that the tree is well adapted to the Southeastern States, parts of Texas and the west coast. No reports of disease or insect injury have been received.

The tree has potential for street planting in those areas where it is hardy.

Alnus hirsuta var. *hirsuta*

The Manchurian alder may grow to 65 feet high. It is closely related to *A. incana* but has larger, rounder leaves to 5 inches long and much larger fruits. It is a very attractive tree that purportedly withstands very acid soils.

This accession was reported as having shown no injury from -20° F. in Iowa. In Montana the plants withstood -40° with shade and irrigation but died the following winter when the protection was removed. Favorable reports on the performance on this species were received from Kentucky, Ohio, South Carolina, and Washington.

Alnus hirsuta var. *tinctoria*

The principal features that distinguish this variety from *A. hirsuta* var. *hirsuta* are its leaves that are an attractive dark red when young and its handsome bark. The hardiness range appears to be about the same for both varieties.

Like most species of the genus, *A. hirsuta* will not tolerate hot, dry weather.

Alnus inokumai

This alder may achieve the greatest height of those discussed here, reaching a height of 90 feet with a trunk

diameter to 28 inches. It is reported to be a fast growing tree with rather hard wood. The tree appears to be intolerant of very acid soils and hot, dry, windswept areas.

Alnus japonica var. *arguta*

The species *A. japonica* is rated by Bailey (*3*) as perhaps the most beautiful of all alders. It is a pyramidal tree to 70 feet with dark-green, deciduous foliage. The leaves of the variety differ from those of the species in being broader and irregularly or doubly serrate.

The tree is very attractive and is reported to withstand -20° F. in Iowa with only moderate injury. Other reports indicate that the variety does well in Ohio, Michigan, Massachusetts, New Jersey, and South Carolina.

Araucaria augustifolia

Plants of this accession were grown from seed collected in the State of Sao Paulo, Brazil. In its native habitat, it is an evergreen to 100 feet high. The branches grow in whorls with long pendant branchlets. The leaves are very stiff, leathery, dark green, long-pointed to 2 inches long. Male cones grow to 4 inches long; female cones, longer. It is coarser than *A. excelsa* but not as subject to summer sun injury.

A. angustifolia does well in California, Georgia, Alabama, and Louisiana. It showed no injury at 16° F. with good air drainage in Ft. Gaines, Ga. Leaf tip injury was sustained at 12° at Savannah, and plants were killed at 5° at Atlanta. Full sun causes slight burning of new growth. The species is not adaptable to the hot dry summers in Texas.

Young specimens are branched to the base and make handsome house and patio plants. They may become good ornamentals or timber trees in central Florida.

Ardisia crenulata

This is a small slow-growing evergreen shrub with 3/8-inch diameter white flowers and red fruit of the same size in clusters of 6 to 14. The background of dark-green leaves makes it an especially handsome Christmas plant and an attractive landscape plant for the deep South.

Favorable adaptation reports have been received from Florida, Louisiana, and California. The plant will not withstand the heat and saline soils in Arizona but thrives in shade at Houston, Tex. It showed no injury at 10° F. in South Carolina but was injured at this temperature in Georgia and Alabama and was later killed at 0° in the same areas.

Ardisia japonica

Seeds, plants, and cuttings of this species were collected at various locations and at different times in Japan. It is a small, rambling evergreen shrub to 6 inches high. Leaves to 3 inches long and 1½ inches wide are sharply toothed, dark-green and leathery; they turn purplish in autumn. Flowers are small and pinkish-white, and the fruit, which is about ¼ inch in diameter, is red and globular.

Reports indicate that *A. japonica* has approximately the same range of adapatability as does *A. crenulata;* that is, the deep South and along the west coast. It was killed at 0° F. in Georgia and Alabama and injured by 101° heat in Texas and Arizona.

A. japonica is most effectively used as a ground cover and as a Christmas pot plant.

Belamcanda chinensis

Seed was collected between 6,000- and 8,000 feet elevation in open fields in Nepal. The parent plants were strap-leaved perennials to 4 feet high with heavy rootstocks. Leaves were 1 inch wide and 10 inches long. Flowers were orange, spotted with red. Capsules split at maturity resembling the drupelets of a blackberry fruit.

It was been reported in this country as a perennial to 36 inches high and 16 inches wide. It has survived at -20° F. Reports from Louisiana indicate it has a tendency to become weedy in warmer climates.

Betula ermanii

The most attractive feature of this tree that may grow to 100 feet high is its bark that peels creamy white on the trunk and orange-brown on the branches. The barrel-shaped fruiting catkins are over 1 inch long.

Reports on its hardiness in the United States are conflicting. It was reported killed to the ground by -8° F in Indiana but suffered only dead tips at -20° in Iowa and no injury from the same temperatures in Minnesota. In Missouri, it was a slow starting low bushy tree until it became established. The reddish, white, and orange bark gave winter interest but the foliage, good in the growing season, lacked distinctive fall color.

This plant deserves more extensive testing. Conceivably, it would be outstanding in certain situations.

Betula grossa

The seed of this species was collected at a forest experiment station in Kyushu. The trees to 75 feet high have dark-gray to nearly black bark that may be fissured on old trees.

In Illinois, the tree is shrubby and tends toward multistems. In Wisconsin, it has slowly regressed after successive winters of -35° F. These temperatures appear to be the lower limit of its survival range.

Betula pendula

The well-known European Birch can be quite variable when grown from seed. The plants referred to here were grown from seed collected in the Soviet Union. Since nothing more was known about the parent source, only the textbook description of the species can be quoted.

None of the trees had shown a pendulous habit at the time of reporting. But this feature frequently does not appear until the tree is more mature.

Reports from Washington, New Mexico, and South Dakota indicate that this number is widely adaptable under irrigation with temperature extremes from -39° to 108° F. It did not survive in the hot, dry climate of Oklahoma and parts of Texas without irrigation. In South Carolina, the trees grew vigorously on poor clay without irrigation. In Ohio and Massachusetts, insect damage was the limiting factor. It is reported to be easily propagated.

The dominant feature of this tree appears to be its adaptability to severe conditions under irrigation where insect damage is not likely to be encountered.

Camellia japonica 'Frost Queen'

In cold hardiness studies of *Camellia* conducted at Glenn Dale, a seedling from the seed accession P.I. 230278 from Japan was outstanding. In the field, it withstood five winters with temperatures as low as -8° F. without appreciable injury. In these tests, the seedling was superior to 'Berenice Boddy', often claimed to be the most hardy camellia variety. 'Ville de Nantes', 'Debutante', and 'Empress' were killed in these same tests. The selection was distributed under the original number P.I. 230278 in 1957, 1961, and 1966. Cooperators reported some flower bud injury at -3°, leaf burn at -10°, and severe plant injury but survival after -26°.

The selection was named 'Frost Queen' and assigned a new number, P.I. 352669, in a Division release in October 1970.

The flowers of 'Frost Queen' are white, semidouble, 14 petals, 4½ to 5 inches across with pale cream stamens and golden yellow anthers—very free flowering during April outdoors at Glenn Dale. The leaves are dark glossy green, 3 to 4 inches long by 1½ to 2¼ inches wide. The plant is vigorous, upright with high light tolerance. It propagates easily from cuttings.

Cornus sanguinea

The seed, from which these plants were grown, was collected in a swampy area at 900-feet elevation in the Kholorash Region of Moldavia, USSR. In that area the plants were small, deciduous, wild shrubs. According to reports from New Jersey and North Dakota, it kills back to the snowline at

temperatures of -45° F. Under these conditions, the lower bark is bright yellow and the upper bark dark mahogany. In central New York and Georgia, the species has excellent winter hardiness, vigor, and blood-red bark, making it a good landscape plant.

Cotoneaster spp.

The principal limiting factor with contoneasters is their susceptibility to fire blight. Of the species distributed, only *C. frigida* was reported as possibly possessing some resistance to fire blight. This report came from South Carolina where the plant also exhibited great vigor. The resistance was the only favorable character reported for the accession. If the resistance is prevalent with the species, it would be of value in a breeding program.

Seedling populations of two accessions, P.I. 274972 and P.I. 285343, of *C. microphylla* were distributed for testing. The seed of P.I. 274972 was collected from very dense, mat-forming, evergreen shrubs growing wild at 10,500-feet elevation near Chandawaia, India. The leaves were small and dark green and the fruit was bright red.

This accession was widely reported as being a most attractive slow-growing, prostrate plant of use as ground cover or for rock gardens. In Washington it was completely hardy under a snow cover at -45° F. A report from Chicago stated that the plant has merit as a conservatory or indoor flower specimen.

Seed of the other accession, P.I. 285343, was collected on dry, open, sunny slopes at 10,200 feet on Mt. Furkai in Nepal. Some seedlings of this accession were reported different from the previous one from India in being more vigorous, spreading widely, and rooting at the tips. These seedlings would make a good ground cover but should be used with caution in situations where they must be constrained. One cooperator reported a particularly attractive seedling of this accession that had both arching and decumbent branching habits. The closely set, small dark-green leaves suggested the name 'Emerald Spray'. P.I. 362103 was assigned to this clone and a description prepared for formal release to the trade.

Damnacanthus indicus

This small densely branched, evergreen shrub has shiny, entire, opposite leaves and stipular spines. The flowers are small, white, fragrant, and axillary. The red fruit remains on the bush until the next season's flowers are produced.

The plant was collected from two different areas in Japan and received wide distribution. It was reported as thriving in Louisiana under temperatures dipping to 12° F. A report from Gainesville, Fla., indicates that the plant is easily propagated and is a most promising landscape ornamental. A report from Miami, Fla., suggests its use as a pot plant on partially shaded patios. The very low percentage of survival reported for this most attractive plant indicates that it has very exacting cultural requirements.

Damnacanthus macrophyllus var. *giganteus* was collected in a damp woods in Japan. It resembles *D. indicus* in appearance. Though quite different, it appears to have equally exacting cultural requirements according to reports received.

Euonymus fortunei 'Longwood'

While exploring in Japan in 1961, J. L. Creech, Plant Science Research Division, collected a plant of *E. fortunei* in the wild on Mt. Tsukuba, Ibarabi Prefecture. It was assigned P.I. 275073 and increased for distribution to cooperators. Reports indicate that this accession has thrived in Maine, Pennsylvania, Washington, Indiana, Kansas, and Louisiana. It has survived temperatures from -25° to 106° F. without injury. But full sun at high temperatures may cause some sunscald. The plant grows vigorously, propagates readily from cuttings and appears tolerant to most diseases and insects.

The name 'Longwood' was assigned to this introduction in recognition of the support of Longwood Gardens, Kennett Square, Pa., for exploration for ornamental plants.

'Longwood' is a prostrate, small-leaved form of *E. fortunei* that shows no tendency to pile up as do most other forms. It is much more vigorous and has larger leaves than the two closest cultivars, 'Kewensis' and 'Minimus'. The leaves are dark green with light-colored veins, ovate, ¾ inch long by ½ inch wide. Its

best use is as a ground cover in shade or partial shade or as a cover on low masonry walls.

Eurya spp.

The *Euryas* are of the same family as *Camellia*, *Theaceae*, which they strongly resemble in appearance, hardiness, and culture. Of the accessions reported upon here, each was collected in Japan except *E. nitida*, which was collected in Louisiana. We do not know the origin of *E. nitida*, although we believe it may have been brought from Southeast Asia by the late E. H. McIhenny early in this century. *E. nitida* and *E. emarginata* var. *microphylla* were collected as cuttings and the others as seed.

Some variation can be expected among seedlings. But the reports fairly well agree on the possible uses of the plants. The plants are generally rated excellent for their foliage with little attention to the flowers or fruit. One report from South Carolina rates *E. emarginata* as being an excellent semidrawf evergreen that responds to shearing. A report from Texas describes this plant as more upright and vigorous than *E. japonica* and thrives in shade. A report from Washington rates it more attractive than *E. ochnacea.*

The reports indicate that *E. ochnacea* may be slightly more hardy than the other species and varieties. While the foliage is somewhat inferior to *E. japonica*, it is easier to propagate and less tempermental. *E. ochnacea* is more widely adaptable, vigorous, and faster growing than *Camellia* which it resembles.

Fatsia japonica

The seeds of this accession were collected at the northern limit of its range in Ibaraki Prefecture on Honshu. This excellent evergreen shrub with deeply cleft leaves is common in the trade in the United States. But, its lack of hardiness limits its use to the warmer areas. The main objective of the collection was to seek greater hardiness among the seedlings to extend the range. One report from South Carolina indicated no injury at 10° F. Another report from an adjacent area stated that early growth is injured by late frosts.

Continued testing may reveal hardiness factors that could extend the range of adaptability as has been done with the *Camellia.*

Ilex (hybrids)

As a part of a holly breeding program at the Glenn Dale station, five cultivars were selected from the F_1 progeny of the cross *Ilex cornuta* (P.I. 65860) X *I. ciliospinosa* (P.I. 78144). Each selection is a compact, evergreen shrub named for horticulturists who pioneered in the work at the station. They are hardy in the Glenn Dale area. Fruit of the female selections is the same dark red as that of *I. ciliospinosa.* The selections were released by the Division in 1969.

'Albert Close' (P.I. 331202)

Female, short pyramidal, very short internodes, dense twiggy growth. Leaves deep green, semiglossy, spinose, ovate, 2 cm. long by 1.3 cm. wide, mostly 3 spines. Fruits pea-size, round, pedicels short.

'William Cowgill' (P.I. 331203)

Female, pyramidal. Leaves medium green, glossy, spinose, lanceolate, 3.3 cm. long by 1.4 cm. wide, mostly 7 spines. New growth pinkish, turning green. Fruits pea-size, round, pedicels short, borne in clusters.

'Howard Dorsett' (P.I. 331204)

Male, pyramidal. Leaves medium green, glossy, spinose, oblong-lanceolate, 4 cm. long by 1.8 cm. wide, mostly 9 spines. New growth pinkish, turning green. Good companion to 'William Cowgill'.

'Edward Goucher' (P.I. 331205)

Female, narrow columnar. Leaves deep green, glossy, spinose, lanceolate, 2.3 cm. long by 1 cm. wide, mostly 7 spines. Fruits pea-size, ovate, pedicels short, heavy bearing.

'Harry Gunning' (P.I. 331206)

Male, globular. Leaves medium green, oblong-lanceolate, 3.8 cm. long by 1.5 cm. wide, mostly 7 spines.

Metasequoia glyptostroboides
'National'

With funds provided by the Arnold Arboretum, seed of the "living fossil" *Metasequoia* were procured from China in 1947. Among several hundred seedlings grown from that seed at the National Arboretum, Washington, D.C., a wide variation in growth habit was noted. 'National' was selected from this seedling population.

'National' is a narrow-pyramidal tree attaining a height of 35 feet in 10 years from seed, 11 feet in 5 years from cuttings at the National Arboretum. An ultimate height of 75 feet may be expected. No injury was noted at -2° F. indicating that the selection may be adaptable in Zone 7 (-10° to 0°). No serious disease or insect problems have been noted.

The summer foliage of 'National' is bright green turning an attractive copper red in autumn before falling. Grass and flowering shrubs grow well under its light shade. The lower trunk becomes interestingly buttressed after 10 years. It is best adapted to a moist site in full sun. Propagation is by semihardwood cuttings in July or August.

Osmanthus heterophyllus
'Gulftide'

In the mid-1950's a plant of *Osmanthus heterophyllus* of unknown origin in the permanent planting at the Glenn Dale station began to attract attention. The growth habit is more upright and compact than the species. The foliage is more heavily spined than the dwarf 'Myrtiofolius', the dark-purple leaved 'Purpureus', the entire-leaved 'Rotundifolius', or any of the variegated leaved types in the trade.

The plant was assigned P.I. 213308 and rooted cuttings were distributed to cooperators. As a result of the favorable reports, it was named 'Gulftide' and the Plant Science Research Division made a formal release to the trade.

Pinus halepensis

The date or means of the first introduction of *P. halepensis* to the United States is uncertain. It may have been tried in many areas but the present commercial sources indicate its usage is mostly limited to the Southwest. Plant Buyer's Guide (*6*) lists five nurseries in California and one each in Texas and Arizona as suppliers of plants of the species. Plants and Gardens (*4*) lists plants available from eight nurseries in California and one each in Washington, Oregon, Pennsylvania, and New York.

The seed numbered P.I. 271431 was collected in Afghanistan by an agricultural explorer for the Plant Science Research Division. The species identity of the seed was uncertain. Plants grown from this seed at the National Arboretum have been positively identified as *P. halepensis.*

Generally, *P. halepensis* is regarded as having little ornamental value other than for seashore planting where little else will grow. However, cooperators' reports indicate that seedlings grown from the seed lot P.I. 271431 withstand heat, drought, and high light intensity exceptionally well. The minimum temperature the plants will endure may depend on a combination of other factors. Plants were killed at -20° F. in Michigan, Kansas, New York, and Ohio but showed no injury at the same temperature in Washington. No injury was reported at -10° in Tennessee but the plants were killed by the same temperature in Rhode Island. The safe lower limit of sustained temperature for this accession may be 0°.

Most of the reports from cooperators agree that plants from P.I. 271431 grow very rapidly while young. The twisted needles with bluish cast and relatively short internodes make an attractive tree. In areas of New Mexico, three or more flushes of growth may be produced each year. The leaves and stems are flexible and unaffected by the heat and intense light of that area. A dense crown is formed without pruning. Considerable interest is being expressed in this pine as a Christmas tree crop for areas of the Southwest United States.

Pyracantha crenulata

Seed of this accession was collected at 8,100-foot elevation in dry open fields in Nepal. Bright-red fruit hangs in clusters on a dense, thorny, upright evergreen shrub. The leaf petioles are about an inch long and also red.

According to reports, the hardiness limit of this plant may lie around 0° F. Plants were completely killed at -19° in Nebraska, slightly injured at -3° in Georgia, and not injured at all at 10° in Virginia. In Maine, the plants killed to the ground at -30° without protection but might be grown as a ground cover under snow.

Grown in a greenhouse in Chicago, it was reported as by far the best *Pyracantha.* The fruit hanging in intense red clusters is enhanced by the rich green foliage.

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